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## CONTENTS

The Need of a National Council on Medical Education, Licensure, and Hospitals.....	289
<i>Willard C. Rappleye</i>	
Medical Education as Discussed in "American Medicine" .....	295
<i>Esther Everett Lape</i>	
On the Training of Medical Students in Preventive Medicine.....	325
<i>Edward L. Munson, M.D., and L. S. Schmitt, M.D.</i>	
Correlation of Scholarship in the Arts College with Scholarship in the Freshman Year in Medical School.....	331
<i>Fred C. Zapfe</i>	
Program of Forty-ninth Annual Meeting.....	334
What is Education?.....	336
Editorials .....	337
College News .....	340
General News .....	345
Abstracts .....	346
Book News .....	349

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*Continued on Third Cover Page*

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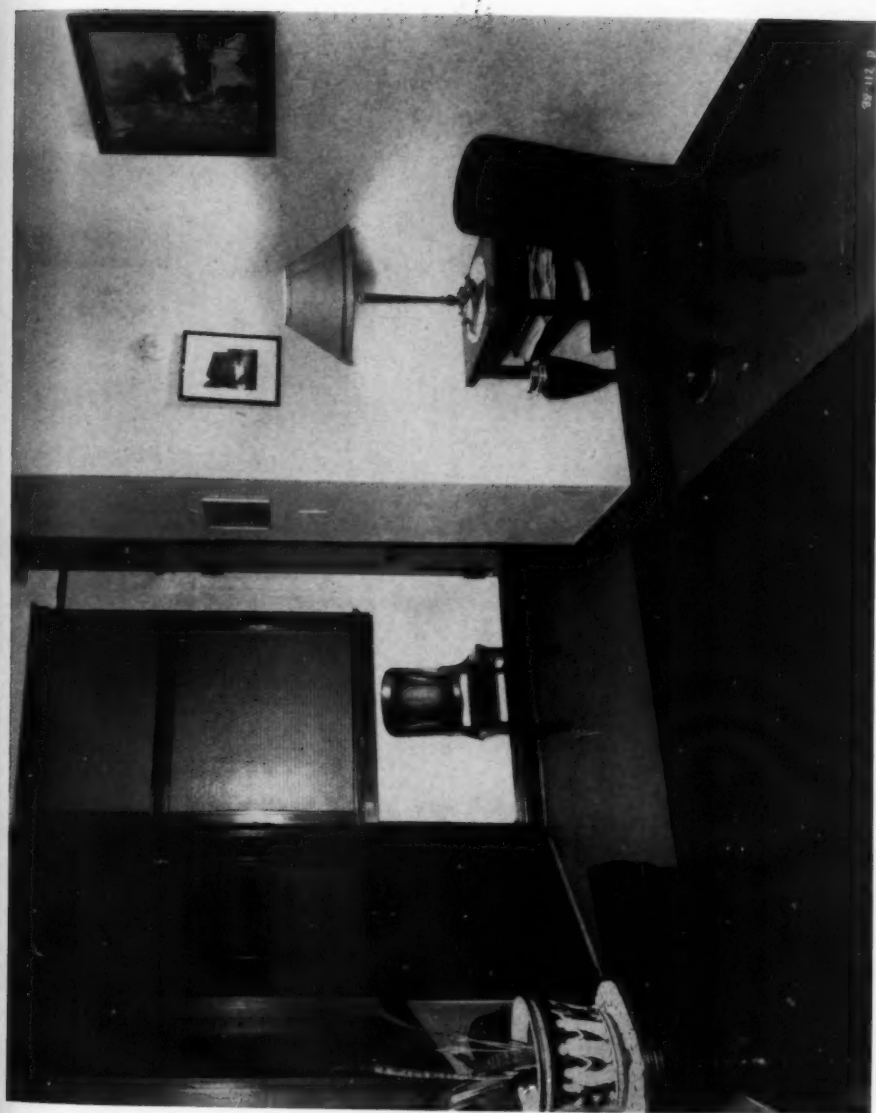
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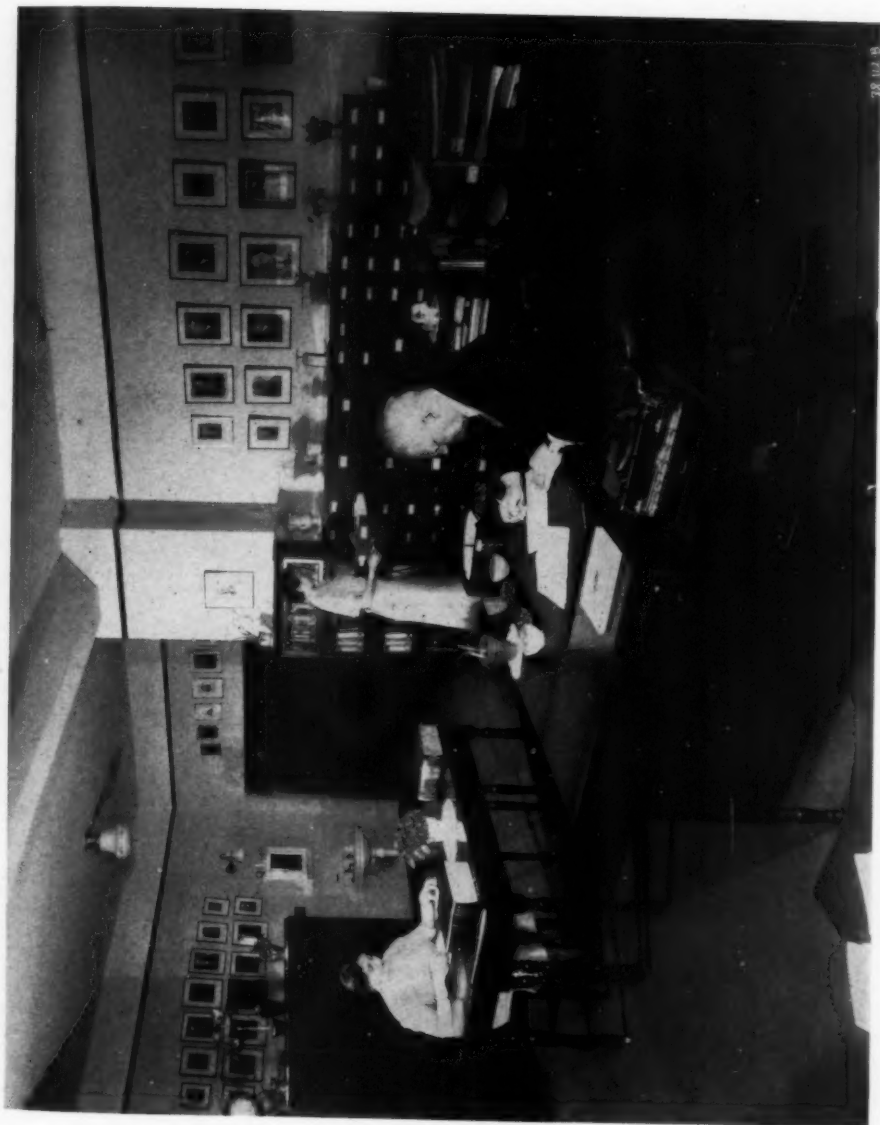


Association of American Medical Colleges Headquarters  
Entrance to Suite.

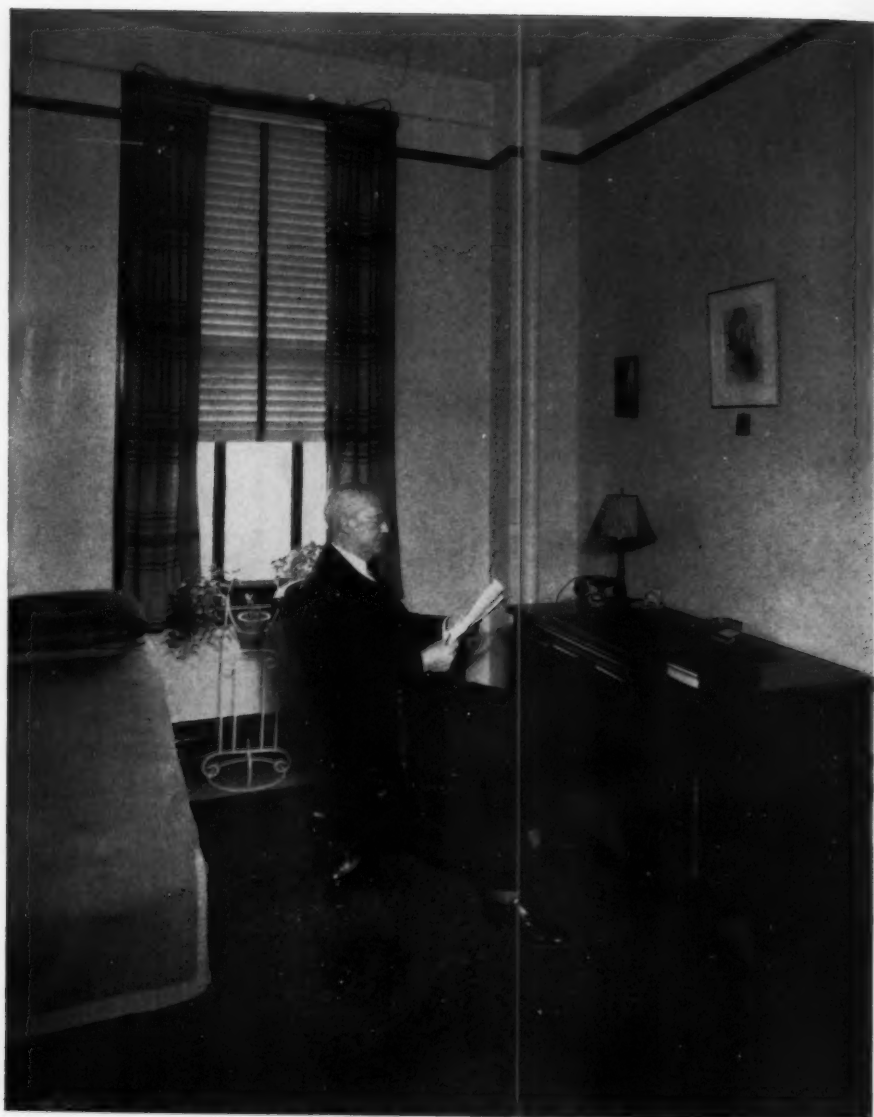


Association of American Medical Colleges Headquarters.  
Main room, looking toward the southeast.

Association of American Medical Colleges Headquarters.  
Main room, looking toward the southeast.



Association of American Medical Colleges Headquarters.  
Main Room, looking toward the northwest. Showing photographs of past presidents.



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JOURNAL  
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Volume 13

SEPTEMBER, 1938

Number 5

**The Need of a National Council  
on Medical Education, Licensure, and Hospitals\***

WILLARD C. RAPPLEYE

Dean, Faculty of Medicine, Columbia University  
New York City

It is a great privilege to be permitted to present to you certain considerations bearing on medical training and practice. Probably at no time in our history have there been greater opportunities for leadership and guidance of public policies relating to medical questions. It is generally agreed that the essential feature of an adequate program of health services is a sufficient number of competent physicians. On medical education, broadly conceived, rests the responsibility of recruiting and training such personnel and of providing opportunities for practitioners to keep abreast of new knowledge and methods of diagnosis, treatment and prevention.

A large number of organizations are dealing with various features of the whole problem, some of them with conspicuous success in their own spheres of influence, although a great deal of duplication, overlapping, competition and confusion exists. At the same time, there are important needs that no individual agency is covering satisfactorily and for which no organization feels responsible. It is of great importance that a thoughtful appraisal be made of our present efforts to meet the current needs and the impending demands on the profession, and that we be prepared at least to consider ways and means of adapting our existing programs to meet more effectively the responsibilities which are likely to be placed on us in the future.

Because of the special conditions existing in the early days of American medicine, the three functions of medical training, practice and licensure were vested in the practicing profession. This was in contrast with the situation even at that time in most of the continental countries of Europe where for centuries medical education was the responsibility of the universities and licensure to practice was a function of the state. In Great Britain and France, professional training was developed largely in the hospitals, with licensure resting in the agencies of the state. It is true that in this country there were some medical schools of high standing but most practitioners of a hundred years ago had been trained by the apprenticeship method.

\*Read before the American Surgical Association at Atlantic City, New Jersey, May 2, 1938.  
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The historical background and tradition in this country of the control of medical training by the profession explains some of the present confusion and difficulties. Medical training now, however, has become the responsibility of medical schools, which are usually associated with universities. All students today must have a period of college preparation preceding the professional training; nearly every graduate takes a hospital internship; every state has its own agency for licensure; the new nation wide plans for graduate and postgraduate education involving the cooperation of the medical schools, hospitals and the profession have been instituted. These developments have occurred in segments and sometimes without much relationship to other parts of the whole structure of medical education or to the programs of other agencies carrying out parallel or duplicating activities.

Only a few items of recent history need be mentioned to suggest the various directions and many sources from which contributions have been made to our present standards of medical training. Just before the Civil War, most states, by legislative action, had removed the function of licensure from medical societies and had placed it under state boards of examiners. Much of this legislation was repealed at the time of the war. About 1870, agitation was renewed for the licensing of physicians by the state, largely because of the recognition of the dependence of sound clinical medicine and practice on the discoveries in bacteriology, pathology, physiology and other sciences. By 1895, practically every state had created some sort of legislative organization regulating medical training and the examination and licensing of physicians. The legal enforcement by the various states of proper standards of training for licensure to practice has been one of the most important factors in elevating medical education in this country.

During the period mentioned above other important developments had occurred. The Association of American Medical Colleges was organized in 1891 to coordinate the educational efforts of the stronger medical schools. In response to the rapidly growing scientific content of medical training, Harvard University, in 1892, increased the length of the course to four years. A number of other schools promptly adopted similar programs. The founding of the medical school of Johns Hopkins University in 1893 further stimulated the awakening interest in medical education.

In 1899, the graded curriculum for medical instruction was adopted generally throughout the country. At about that time, the American Medical Association began its important work of collecting and publishing statistics on the medical school situation. In 1904, it created the Council on Medical Education which is responsible to the House of Delegates elected by the state medical societies. In 1909, that Council adopted as its standard the four year course which was in force in most of the leading schools at that time. Seventeen medical schools had already established the requirement of two or more years of college work for admission and eleven more made that regulation effective in 1910. This requirement was embodied in the minimum standard of the Coun-

cil eight years later, at which time eighty-one of the ninety schools then in existence had adopted that requirement. It happens that eight states do not yet officially require two years of premedical college preparation although most of these states admit to their licensing examinations only graduates of approved medical schools. The monumental study made by Mr. Abraham Flexner for the Carnegie Foundation for the Advancement of Teaching was published in 1910. That study, and the publicity it received, gave great impetus to the efforts to establish high standards of training and stimulated the needed financial support for medical education and research and for teaching hospitals.

Full credit is due all the various individuals and organizations which contributed to the rapid elevation of the standards of medical training in this country, particularly to the courage, leadership and financial aid of the universities and educational foundations, the participation of hospitals in the teaching plans, and the enforcement of standards by the state boards. There is no need of reciting here the contributions of the American Surgical Association or of the American College of Surgeons to the training and practice in surgery and the striking influence these have had on hospital standards in the country. The Association of American Medical Colleges and the universities have devoted great energy to the improvement of the basic undergraduate course. The Federation of State Medical Boards, individual state boards, and the National Board of Medical Examiners have rendered invaluable aid in their respective fields of action. The hospital associations are assisting in every way and now have greatly enlarged problems because of the newer demands on them for better intern training and for graduate programs. All of you are familiar with the plans of the twelve American boards and of the Advisory Board for Medical Specialties which are largely responsible for the rapid and sound progress in graduate training. Special credit should be given to the Council on Medical Education and Hospitals of the American Medical Association in dealing with the proprietary, commercial and weaker schools and in the collection and distribution of data on students, schools, state board activities and other features of the whole program. While rules, regulations and minimum standards have played an important part in the evolution of the present programs, the great strides have been made at levels well above the minimum standards by individual schools and universities under local leadership and by the desire of other institutions to emulate their successful undertakings.

As a result of the activities described and the increasing necessity of medical schools to provide adequate training in the medical sciences, which could not be met either by the weaker schools or by the commercial and proprietary institutions, the number of medical schools in the United States was reduced from 154 four year medical schools in 1906 to the present 67. The graduates dropped from 5,364 in 1906 to 2,520 in 1922, but there has been a marked increase since that year. The number reached 5,377 in 1937, a total almost identical with that of 1906. In other words, we are today graduating as many physicians from 67 medical schools as we did from 154 institutions thirty-two

years ago. That a number of schools have enrolled more students than they can educate in keeping with present day standards has been recognized for years. During the last three years, however, the entering classes of certain of the schools have been reduced. In time the size of the student body in some of the institutions will be better adapted to their educational facilities and teaching programs. The figures cited do not include the additions to our profession made annually from Canadian and foreign sources, from unapproved institutions, and from Americans who study abroad.

It is common knowledge that, despite efforts of the last thirty years to standardize medical education, "wide differences continue to exist in buildings, equipment, personnel, students, financial support, hospital facilities, and educational policies." In response to this situation, a reinspection of the medical schools made recently by the Council on Medical Education has shown that about twenty of the institutions approved by that Council do not even now provide a fully satisfactory preparation. If it is true, as stated by the Commission on Medical Education, that "an emphasis on educational principles in medical training and licensure can be secured only by modifying the point of view and broadening the interests of those responsible for medical education and licensure, not by recommendations, statistics, new regulations, further legislation, or manipulation of the curriculum," the evaluation of medical school objectives and programs can best be secured not by an agency representing the profession alone, which really is the alumni body of the schools, but by one which represents fully as much the educational, hospital, licensing and other phases of this problem.

Students entering medicine prepare in about 600 colleges and universities. The requirements for admission vary considerably. There is a wide range of opinion on the objectives and content of preprofessional education. The basis of selection by different schools is not only undefined but frequently contradictory. Recent developments in graduate fields of instruction emphasize the need of better criteria of selection at the source. The situation is confusing to students and to those responsible for the conduct of the colleges and universities. There are numerous problems relating to general and medical education pressing for study and solution, yet there is no convenient mechanism in existence by which these mutual problems of medical schools and colleges can be discussed and defined.

The increasing dependence of sound medical education upon individualized, supervised experience in the teaching wards and clinics by means of the clinical clerkships presents special problems for the hospitals. The internship has become universally recognized as an essential part of the basic preparation for practice. Twenty states now require such a training for admission to the licensing examinations. Some of them so define and regulate this period of training, however, that they defeat the efforts of universities, medical schools and hospitals to provide a satisfactory preparation adapted to the needs of those going into different fields of practice. Uniformity, rigidity and regulation are not

distinguishing characteristics of an educational program. It is well known that the intern period is poorly adjusted in many hospitals to the preceding medical course, to the needs of the student and to subsequent graduate training. Even the approval of national evaluating bodies is uncertain. An intensive study of internships in a group of eastern hospitals recently has shown that not more than one half of the hospitals approved for intern training by the Council on Medical Education and Hospitals provides satisfactory educational standards. The proportion of residencies meeting a real educational level is smaller. There is need for joint and continuing study of the place and functions of the internship and residency in the evolution of the medical course, graduate training and licensure.

Excellent cooperation exists between most of the state medical boards and the medical schools and between the large majority of the different states on matters of reciprocity and indorsement of educational credentials. The National Board of Medical Examiners, organized in 1915, has been very helpful in establishing a national point of view regarding licensure. Many believe that medical licensure in the country as a whole could be simplified through some joint action by the Federation of State Medical Boards, The Association of American Medical Colleges and the National Board of Medical Examiners. It is reasonable to assume that eventually this problem will be dealt with in a manner analagous to that found satisfactory in other countries. At the present time no agency exists for study and integration of this important public and educational function.

Plans already developed for graduate and postgraduate training will require wide and, in some instances, fundamental readjustments in hospital services, if the hospitals are to participate fully in these newer opportunities. The medical schools and universities are being called on to assume responsibilities in these same programs. All are being subjected to numerous surveys and inspections by different agencies, frequently overlapping in their interests and conflicting in their objectives. The twelve American specialty boards and the Advisory Board for Medical Specialties, created in 1933, recognize the dangers of rigidity, regimentation and regulation in the field of graduate training which must depend so largely upon the educational initiative, self-reliance, and resourcefulness of the individual. The upward extension of medical education into the graduate fields should be based, with necessary adaptations, on those principles of selection of students, concepts of learning, forms of instruction, and other features which characterize true graduate education.

Sound plans for the evaluation and approval of graduate programs can not be evolved by a single agency but call for cooperative action by a group representing the various major interests involved. The proposals, for example, that national and state registers or directories of specialists be created and that general practitioners be certified for continuation instruction have definite relationships to present methods of licensure. The state agencies should obviously be brought fully into the general plan.

The premedical student, the medical student, the intern, the hospital resident, the general practitioner, the specialist, and the public health administrator should be regarded from an educational point of view merely as different phases of the training of personnel to meet the health needs of the country. The problems from college preparation to retirement from professional life should be looked upon as parts of a single educational program. Portions of the program are primarily within the jurisdiction of universities, some are largely within the domain of the hospitals, others are in the various fields of practice, and some are under governmental regulation.

It is becoming increasingly apparent to those familiar with the situation that there is need of coordination of the various phases of medical education and better definition of the several areas of responsibility of national and state agencies, universities, hospitals, and professional bodies dealing with portions of the whole program, if medicine in this country is to meet fully its obligations. Reluctant as one may be to see another agency in medicine, the logical conclusion from the present more or less unrelated and frequently overlapping efforts is to create a national coordinating body representative of the major activities in medical education and service in order more effectively to meet the new conditions and needs of the country.

A National Council on Medical Education, Licensure and Hospitals should be created from within our present organizations, made up of representatives of the universities, medical schools, hospitals, practicing profession, specialty boards, state licensing bodies and public health agencies. There should be no difficulty in securing full representation of leaders in every subdivision of medical education and practice, hospital activities, licensure and public health on such a central body. If such an organization is created the modest financial support from voluntary sources should not be difficult to obtain.

The functions of the proposed National Council on Medical Education, Licensure and Hospitals would be those of studying the major educational needs of American medicine, of mobilizing the best current opinions regarding the different phases of professional training at its several levels, of formulating adequate standards for these activities, and of advising regulatory bodies and governmental agencies on standards, methods, procedures and areas of action. The National Council should, among other things, delegate to existing organizations all administrative functions and endeavor to coordinate the efforts and simplify the procedures of the multiple agencies now in operation. A central clearing house, carrying influence and prestige by virtue of the knowledge and judgment of its personnel, and providing a suitable vehicle of our own creation for cooperation on matters dealing with all features of medical education, transcending the activities and interests of any single group or organization, would be of the greatest practical value to the profession, the universities, the hospitals, the licensing bodies and the future health program of the entire country.\*

\*The American Surgical Association officially endorsed the organization of a National Council as proposed by Dr. Rappleye.



## Medical Education As Discussed in "American Medicine"

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New York City

### PRESENT TRENDS IN MEDICAL CURRICULA

#### I.

#### IS THE "LABORATORY APPROACH" STILL OVERSTRESSED?

The familiar controversy as to whether the revised medical education of the present day does or does not tend to produce "super-scientists" in medicine naturally receives full measure of attention from medical men writing on medical education in "American Medicine." Opinions on this question cover a wide range. Many writers stress the need of a historical point of view in the effort to arrive at an answer—the need of a wise patience in allowing time for tendencies to settle and for balance to be achieved. The scientific procedures, they observe, probably have been somewhat overstressed by certain of the medical schools, but they feel that the pendulum is already on the upward swing and that there is certainly no reason for widespread concern lest present day medical education turn out a generation of "super-scientists." Any tendency and any technique in education, they point out, in the hands of shallow exponents, may produce a result that contradicts the very philosophy that established the technique. Competent testimony from men who have had every opportunity to follow the situation in the approved medical schools of the country seems to show that the situation has already fallen into reasonable focus.

There is alert appreciation of the historical background of overstress on scientific procedures; the following from an assistant professor in the Harvard Medical School is illustrative:

"The founders of the great school of German internal medicine were men of outstanding personality, with broad vision, great wisdom, and often with remarkable versatility. It was they who conceived, and later put into effect, the

---

This is the second of a series of three articles on medical education, reflecting the views of two thousand odd representative medical men, as contained in Chapter III of "American Medicine," published by The American Foundation.

The contributors to "American Medicine," it is to be remembered, include either the dean or members of the faculty from all of the four year medical schools in the country except two. Nineteen of the thirty-four deans of approved medical schools that participated in the inquiry included extended statements on medical education. The faculty contributors include full time and part time professors, associate clinical professors and assistant professors, associates, instructors, lecturers and preceptors. In addition to the academic contributors, the writers on education include a considerable group of men that have no teaching connection: general practitioners, internists, surgeons. The writers on education also include laboratory men, administrators, members of examining and certifying boards.

The first article—published in the November issue—dealt with the past and the present in medical education, with particular reference to controlling philosophies in the matter of limiting numbers of students and also with reference to that major problem, selection of the student personnel.

The present article deals with present trends in medical curricula.

The third article will deal with postgraduate education—less, perhaps, with the postgraduate education designed to furnish preparation for special practice than with postgraduate education designed to give the practitioner the means of keeping abreast with the development of medical science and improvements in medical practice.

idea that the study of the diseased human being should be conducted in the same manner as the problems of the natural sciences. In order to achieve this, it became necessary to supplement the primitive bedside presentation of cases, heretofore the sole method of teaching, with critical lecture room demonstrations on the development, manifestations and treatment of disease. In addition, in order to study disease with the tools of chemistry, physics, physiology and bacteriology, laboratories were attached to the clinic.

"During the following three decades the accomplishments in the laboratories became, however, over-emphasized at the expense of investigation at the bedside. The teaching of medicine was to a large extent removed from the ward to the lecture room. . . .

"As chemistry, physiology and bacteriology developed, however, the assistants retired more and more from the bedside and became interested in the problems in which technique, and not the manifestations of the disease, was the dominating interest. The scientific work became narrower and narrower in scope. Furthermore, all the clinics were organized on a quite similar pattern, under the supervision of the state. Activities became decentralized and, with this change, bits of knowledge bearing on methods rather than on clinical problems occupied all interest."

Also, by way of taking historical background into account, several writers express the view that one very concrete factor has greatly influenced the development of laboratory emphasis: the Johns Hopkins school, they set forth, established certain standards at a significant period and medical schools ever since that time have been engaged in copying them. Where the methods are imitated without the comprehensive conception, without the balance, and without, perhaps, the facilities needed for a full realization of the technique, the results of the "imitation" are naturally bad. A professor of orthopedic surgery in one of the older schools on the approved list, who is one of those that *does* feel that present methods tend to produce narrow technicians, observes on this cult of imitation of Johns Hopkins:

"The standards that were printed could be copied. Those that were not, i.e., the imponderables, could not be copied. Hence the failure of most medical schools today to turn out doctors who should be that which their credentials indicate they are.

"Johns Hopkins, with its original staff, created an atmosphere indescribable in words—that had to be breathed to be appreciated. Since that has passed imitation of that atmosphere has left all of the early adverse criticism of Hopkins without any of the far, far greater something it gave, and has produced a generation of technicians (in the broad sense) but not doctors."

There can never be too much science in medical training, according to certain competent writers in this report. Where the emphasis on scientific procedures has resulted in distortion, they feel, the cause is to be found in poor teaching or in lack of "integration" or in poor student material. Students incapable of grasping the full substance of science naturally fasten eagerly upon definite procedures which they can master.

Some correspondents feel that the full time teacher (whose doorstep traditionally accommodates charges that cannot be easily lodged elsewhere) is, in a manner, responsible for overstress on the science of medicine. A general practitioner in an Eastern city observes, for instance:

"Medical schools with their full time professors have too often emphasized over-much the science of medicine. The making of a correct diagnosis has too much overshadowed the relief of symptoms."

A similar tendency to ascribe young practitioners' "dependence upon machinery" to the type of teaching they have had in medical school is reflected by an officer of the American Medical Association who is also the medical director of a large hospital and has elsewhere had wide opportunity to see young doctors in many parts of the country:

"The faculties that do not teach practical medicine are perhaps in some degree responsible for the wave of machine shops which young physicians are setting up all over the country. Failing inspirational influence, the social objective of some young physicians seems to place material gain above service to the sick. They continue their education under the seductive eloquence of salesmen for machinery and drug houses and go deeply into debt, mortgaging their future for several years of installments, which must be retrieved from credulous patients, who are put through the whole show of unnecessary X-ray, fluoroscopic, electrocardiographic, lamp and mechanical tests with which the physician himself is only faintly acquainted.

"It is an amazing experience to walk into the office of a recent graduate and realize, by quick computation, that some one is backing an investment of from three to five thousand dollars or more in mechanical equipment. It is reasonable to fear that these young physicians are in danger of slipping into the mire of quackery, are sacrificing ideals to expediency, and are also creating an impression in the minds of patients that physicians who do not possess these elaborate instruments are consequently incompetent to make diagnoses or to advise up-to-date therapy."

Without charging either the full time teachers or the medical schools generally with any responsibility in the matter, the following, from a former president of the American College of Physicians, a professor of clinical medicine in an approved medical school, illustrates the view that, from whatever cause, the conception of disease has been narrowed and that laboratory emphasis has been exalted at the expense of clinical observation:

"During the rapid development of pathology and bacteriology, physicians assumed an unwarranted scientific attainment. This was a laboratory and test-tube conception, and largely left out of consideration the fact that the disease involved a human being whose reaction depended upon his inherited qualifications, and his external environment, as well as upon structural changes within his body. The failure to recognize these important factors had too much of a tendency to narrow our conception of disease, to exalt laboratory methods at the expense of clinical observation, and to standardize things that could not be standardized.

"The most important conception in medicine is an individual one. The reaction of each individual is determined first by his inherited qualities, secondly by his personality and emotional nature and, thirdly, by the environment in which he lives; environment in its broadest conception—atmospheric, social, domestic, economic. This cannot be readily measured by laboratory measures.

"Our failure to realize this fact earlier has not only retarded medical progress but has made the path for medicine much more difficult than was necessary.

"For a long period we did not consider any symptoms for which we could not determine an organic cause as worthy of our attention. We failed to rec-

ognize that a patient whose personality and emotional nature made it impossible for him to react normally in the presence of slight stimuli was just as worthy of medical consideration as the one who became ill in spite of a stable physiologic basis. This caused a certain Harvard professor to make a very serious blunder in stating that most of the patients who visit physicians' offices have nothing the matter with them. Furthermore, this failure to recognize these facts lies at the bottom of modern cults . . . faith healing, mental healing, Christian Science, osteopathy and chiropractic all came forward to meet these deficiencies of medical practice."

*Other views supporting the position that preoccupation with specific procedures results in lack of the human approach among many young medical graduates of the present time.*

The following type of comment is usual. It comes from an assistant clinical professor of surgery, FACS, in an approved medical school:

"At the present time our young interns are coming to us devoid of the human approach. There is too much of the laboratory approach . . . The mental and subjective complaints of the patient receive little or no attention until laboratory reports are assembled and digested. The patient feels neglected and, in my opinion, he is."

A San Francisco physician who has taught medicine forty-four years in an approved medical school observes:

"Even in the best schools the tendency is to stress scientific accuracy in diagnosis at the expense of knowledge about the means to remove the conditions diagnosed. Too many of our students are satisfied when they are able to supply an accurate explanation of the patient's illness, while they forget that the patient is not satisfied by explanations, but desires relief and restoration to health—about which they are often helpless.

"There is too much time given to teaching pathology and laboratory technique, while too little is given to materia medica and therapeutics."

Other comments in the same vein include one from a professor of internal medicine on the staff of two approved medical schools in the middle west:

"The disposition in medical schools to stress the necessity for many and various laboratory tests upon the blood and the secretions means added expense, sloppy clinical examinations and a finicky, half-hearted diagnosis of the patient himself."

Other writers would define the difficulty as understress on therapeutics rather than as overstress on diagnosis. The dean of an approved medical school in a state university puts the matter equably when he says:

"As an educator, I am used to having all the deficiencies in medicine blamed on medical colleges, and in order to add one more I would suggest that the medical colleges, in their endeavor to understand disease, have not developed therapeutics to the point that they have diagnosis. Perhaps the medical group is not as solicitous of therapeutic effort as it should be."

Among those that make the point that emphasis on mechanical procedures is only unfortunate when clinical judgment is absent, is a professor of medicine at the University of Chicago who makes the point that a more discerning and more competent eliciting of the patient's history would often make unnecessary elaborate scientific tests. He cites as an illustration of his point the doctor who sends

"the patient to a laboratory for an X-ray examination; receives a report that the patient has a pathologic appendix or gall bladder; and then acts accordingly.

"Ten minutes spent on the history might have shown that this 'pathology' was innocuous."

Among the advocates of more intensive use of the technical equipment "inside the doctor's skull" and less use of machinery, is a North Carolina internist and neurologist, FACP, who provides a significant narrative:

"I think it was Dr. Herrick of Chicago who told this story: He was walking through a hospital ward and came to a man propped up in bed, gasping and heaving for breath, his chest bare, with an enormous visible pulsation all over an enormous cardiac area that could be seen half across the room. He asked the intern or some student what he could say about the size of the man's heart, wanting, of course, to hear him say that the heart was enormously enlarged, the so-called 'cor bovinum' or 'beef-heart.'

"The youngster's reply was an interesting unconscious comment on present day medical training. He said, 'I'm very sorry, sir, but the teleroentgenographic report has not yet come up from the X-ray laboratory. Shall I send for it, sir?'

"At which Herrick's comment was something like this: 'Shades of Hippocrates and Sydenham! What were the boy's eyes for?'"

All of this, of course, is less an indictment of "machinery" than a plea for balance. A percentage of the writers, of course, offer such testimony as for instance that they have found an electrocardiograph useful in only rare instances. Few would go so far, but a great many would agree with the observation attributed to Dr. Stengel of the University of Pennsylvania, that an upright or a prostrate patient is of much more importance than an upright or prostrate wave in an electrocardiograph.

As in most factors in the medical situation, the public is indicted for its contribution to overstress on elaborate diagnostic procedures, use of sera, vaccines, etc. So long, it is maintained, as patients are eager to pay for definite mechanical procedures but quite unwilling to pay for mere advice, hard-driven practitioners, in close competition in many neighborhoods, will tend to provide those "products" which the public considers to be worth a fee. The public, it is pointed out, inclines in any case to the commodity view of medicine. Sera, vaccines, X-rays, mechanical tests are easily recognized as a *quid pro quo*, as value received for the fee. For these things people have respect; they do not see the same logic in paying the evaluator of the testimony which the machines provide; nor have they the same respect for the person who decides whether the sera and vaccines are or are not applicable in the given case. They fail to see that the most valuable "product" of all and the thing most worth paying for, will always be the intelligence of the practitioner. It is true enough that more gray matter in the public will tend to a more productive use of gray matter on the part of the doctor.

*The view that there is no undue stressing of the laboratory approach.*

Many of those who feel that the development of clinical judgment in medical schools at present leaves much to be desired, nevertheless deeply object to the assumption that scientific procedures are overstressed. The major problem,



they feel, is not that there is too much science in medical education and medical practice, but that there is still not enough science. The outstanding defect in medical practice, they consider, is the inability of the rank and file of medical practitioners either to use or to appreciate the importance of scientific aids to diagnosis. Belated diagnosis, much of it due to the doctor, is still the greatest cause of mortality in the country. The forthright advocates of the routine use of scientific procedure feel that it is far better that a certain number of "unnecessary" tests for the purpose of eliminating possibilities should have been made than that a single test should have been omitted in an instance in which it might have led to the needed diagnosis *in time*. There are still, in the view of a number of the writers in "American Medicine," too many philosophers and too few scientists in medical practice. There is still more to be feared, therefore, from the over-philosophic than from the over-scientific attitude. As a professor of medicine, in one of the older schools, puts it,

"There is nothing more dangerous than a practicing physician who becomes too early in his life an enthusiastic student of the functional phases of medicine, thereby developing himself into a philosopher instead of a scientist (not that a true philosopher is not a scientist) . . .

"I have never in my experience in the practice of medicine seen a gross error which could be attributed to a superior knowledge in the basic principles and sciences of medicine, but I have seen hundreds of gross and pathetic mistakes which were directly attributable to a lack of appreciation of those principles of the medical sciences which have as their foundation a thorough basic knowledge."

An assistant professor of psychiatry in an approved medical school, a member of the American Psychiatric Association, reflects that after all the arguments *pro* and *con* have been heard, it remains true that the X-ray shadow of a heart is a more positive method of detecting the size of a heart than percussion with the fingers. The future of American medicine, he believes, will depend on progressive development in making these laboratory tests more regularly accurate:

"Surely a chemical estimate of the blood calcium is a more reliable criterion of calcium deficiency than such symptoms as Chvostek's sign; the latter points the finger of suspicion at that condition, the former proves it. I recognize, of course, that there are still a great many conditions in which the laboratory information is of no value and physical examination makes the diagnosis, but I am inclined to disagree with those physicians who decry the growing interest in laboratory methods."

The writers in this vein feel that it would be dangerous indeed to aim at reducing the emphasis now being laid upon mechanical procedures in the best medical schools. Those that glorify the general practitioner of the past and now, in somewhat failing voices, advocate his "return"—and with him a return to "human" rather than scientific procedures—are, it is maintained attempting to turn back the clock. The real physician of the future will also be a great "human" figure, as was the great doctor of the past; but his greatness will not be arrived at by foregoing the scientific aids to diagnosis. The general practitioner who, many assume, will in the course of time again dominate the medical practice of the country will be a thoroughly transformed general practitioner.

If he is really to lead in the practice of American medicine, it is argued, he will function as the diagnostician *par excellence*; in which case he will certainly have fully to appreciate if not personally to master all the scientific procedures upon which, from this point on in medical science, adequate diagnosis must largely depend. He will be, in short, a man of very different training and of much more positive competence than the general practitioner of the past. A professor of orthopedic surgery in an approved medical school in the middle west observes:

"The return of the old practitioner is not to be expected or hoped for. He was not as good as he was supposed to be, and cannot be as good as he needs to be if he is supposed to know everything. What we require above all things for the general run of practice is men who are amply trained in internal medicine and who are equipped to do all of the absolutely necessary laboratory work for themselves, should it be required of them."

There is not, it must be clear, in "American Medicine" any blinking of the present fact that a very large proportion of men now in general practice are not only themselves incompetent in the technique of laboratory procedures but are also incompetent to deal with the reports made to them by the laboratory.

Sensible men on both sides of the controversy would agree that clinical methods may well be exhausted before extensive laboratory methods are applied. The scientific procedure is an accompaniment to clinical diagnosis, not a substitute for it. Several writers make the very interesting point that the competent practitioner's real view of the scientific technique is shown by the fact that where the question of expense does not enter, i.e., where the doctor is not afraid that he will overtax his patient's resources, where, for instance, government or philanthropy and not the patient or the doctor are paying the bill—the tendency is to use the scientific aids freely and early. A member of the American Roentgen Ray Society points out:

"Most doctors are in the habit of asking for three or four times as much X-ray diagnostic work on charity patients as they demand for their pay patients. The inference would seem to be that they would like in all cases to have a more ample X-ray diagnosis than they usually ask for and, when they are able to pitch the burden in the lap of the radiologist or the hospital on the basis that the patient is not able to pay for anything anyway, they ask for plenty."

There is more than an implication that if practitioners are honest they must admit that, in many cases, they cannot have absolute knowledge as to whether the scientific procedures are or are not needed until *after* the tests have been made. Those that make a plea for handling the general run of cases with "less science and more common sense" ignore the basic truth in the Irishman's contention that he would not be able to say whether the shoes were too small until he had worn them a while. If an examination is worth making at all, it is, in the judgment of a convinced group of these writers, worth making thoroughly. Every practitioner recalls instances in his practice where an examination omitted the one procedure that would have been revealing, because there was no particular indication for making it.

Admittedly the cost of the scientific process is high, but against the added expense is to be balanced the economy of hastening or perfecting diagnosis and advancing proper treatment. Early diagnosis lessens periods of disability and hastens return to health and to employment. These economic considerations are intelligently urged against such pleas as that the scientific aids to diagnosis are so costly that use of them should be sparing. In this, as in other aspects of medical care discussed in "American Medicine," two points emerge clearly:

(1) that the medical values inherent in the use of the scientific aids to diagnosis and the economic values inherent in the patient's difficulty in paying for them, are quite separate problems; and

(2) that, on the economic ground alone, refraining from expensive tests "saves" nothing when checked up against the fact that belated diagnosis is the cause of much of our present mortality and much of our present industrial disability.

In sum, a convinced group in "American Medicine" takes the line that much of the mortality and illness of the present day is sharply attributable to the fact that the scientific aids to diagnosis are either not used at all or used too late. In the view of this group there cannot be any lessening of emphasis on "science," or the scientific procedures, in the medical school.

*The competence of the evaluator is the real issue.*

The problem should be posed, according to some thinkers, not as overemphasis on laboratory technique but as underemphasis on proper interpretation of laboratory studies. The manner of using technical procedure is, it is stressed, a major consideration. Not only are the scientific tests and products of no value unless properly made and used, but they can be actually harmful through improper interpretation. The fine skill of the interpreter will remain the central factor in the use of laboratory products and procedures. The laboratory is, after all, not the diagnostician. After all the complex procedures have been brought into play, the determining factor remains the diagnostician's judgment. Perhaps he might receive more help than he commonly now does from the laboratory technicians or the laboratory head. More than a few hospital X-ray departments, it would appear from this testimony, fail to render to the staff the degree of service of which they are potentially capable.

And of course the scientific findings must be intelligently related to all other available data. A policy of examining the patient more and the films less, as a former president of the Association of American Physicians observes, is sometime in order. There are more than a few histories of error due to intense scrutiny of the films without a corresponding taking into account of the patient himself. Because the scientific tests turn up some factor that *could* be responsible for this or that disease, there is danger in a swift assumption that here, beyond the shadow of a doubt, is the cause we are seeking. Too implicit reliance upon laboratory examinations may even, as one writer observes, cause sound clinical judgment to shrivel up from disuse, and without the sound clinical judgment the "laboratory aids" may take us far astray:

"A lesion found by the use of the X-rays may not be the one, as the history would show, that is causing symptoms. The man with a gallstone plainly visible in the film may be suffering from angina pectoris, which the instrument is powerless to disclose. The stone may be quiet, the coronary disease active. The X-rays cannot show a pericardial or pleural friction or a few apical râles that may point suspiciously toward tuberculosis."

There is, in short, no virtue in procedure alone. The usefulness of the scientific technique is dependent upon (1) the quality of the laboratory work, and (2) the competence of the evaluator—which competence includes ability to take the whole picture into account. Admittedly there is danger in the deification of any technique. The other day one of the great pneumonia experts in the country, in commenting on the beneficent provision of sera by state laboratories, stressed also the frequent nullification of this benefit by the ignorant usage of practitioners who in too great numbers demand and use the free sera without even the formality of typing the disease. In the course of the present national campaign looking toward the control of syphilis, a major difficulty, it would appear, is the inability to depend upon uniform excellence in the performance of various laboratories throughout the country and in the evaluation of these tests by medical men. There has been frank reference to "tests" that have attributed syphilis to patients that do not have it and that have, on the other hand, failed to detect the disease when tests more accurately performed would have revealed it. All this is only another way of saying that without rigid competence in the making of the tests and marked competence in the evaluating, the tests are a doubtful factor indeed.

Several forceful writers suggest that certain of the very schools that most stress the laboratory approach in medical education do not, nevertheless, produce the students that can use intelligently the very procedures upon which so much of their time and attention in medical school have been spent. The past president of a state medical association observes:

"Those of us that have had practical experience with recent graduates have long since learned that we cannot trust them for examinations of secretions or tissues unless they are of the simplest possible nature."

It ought not to be assumed, some writers pointedly suggest, that the amount of laboratory work a medical course can normally convey will produce a competent pathologist.

"A practical pathologist" should, it is set forth,

"have spent from three to five years in close training in some large and well-equipped laboratory, should have made a large number of necropsies, and should have interpreted under careful supervision several thousand sections."

If this is true, he points out, what confidence is to be placed in

"the mere smattering of pathological knowledge acquired by the recent graduate?"

The really burning question is whether in the undergraduate course it is possible at all to produce competence in the laboratory technique in the degree that the practitioner needs it.

Thus the question with which we started—as to whether there is over-emphasis on scientific procedures in the present course—is transformed into the quite different question as to whether, within the limits of the present course, it is possible to give the general practitioner enough of the scientific technique to make the general practitioner reasonably competent in diagnosis.

## II.

### IS PREPARATION FOR GENERAL PRACTICE SUBORDINATED TO THE CLAIMS OF THE SPECIALISTS?

The familiar contention that the medical education of today gives too much attention to rare diseases and unusual conditions has, expectably, a hearing in "American Medicine." As a professor of medicine in an approved medical school of the east puts it, a major present problem is to develop the kind of undergraduate training that will produce medical graduates capable of dealing with morbidity in its earliest manifestations rather than in its final stages in the bed of a municipal hospital. There is something distinctly heartfelt in the feeling of many of the older men, obviously based upon direct experience with young associates, that medical graduates of today are frankly unfit for the run of the mill practice with which they have actually to deal. These graduates, it is pointed out, have come from a course of training in which, as a competent general practitioner in New England observes:

"Too much thought is given to rare diseases, wonderful cures, difficult operations, and hospitals with expensive equipment, and too little to the simple, rational and fundamental factors in both the cure and the prevention of disease."

In the hospitals, as a former president of the Association of American Medical Colleges puts it, the student sees the severely sick and puzzling cases, but the great majority of cases with which he is to deal in actual practice are neither puzzling nor complicated. The most brilliant undergraduate in medical science may easily find himself worsted by the average ills of the folks in the home town.

Consideration of the whole *objective* of medical education is pertinent here. Are the four years of undergraduate training designed to prepare "general" men to practice medicine, or rather to prepare young men to follow intensive training later in a restricted field?

On this question of the objective of medical education, of the nature of the "product" which the medical schools should aim to turn out, there are, roughly, three schools of thought: (1) those that believe the medical course should aim at producing the general practitioner; (2) those that feel that the age of general practice is past and that the medical school should frankly aim at developing specialists; (3) those that believe in preparing students for general practice but who believe also that the very considerable number of students aiming at special practice must be taken into account and that the curriculum must be designed to give them the particular training and outlook they need, in a preparatory way, for their future special work.



It is because these questions have not been clearly answered and because the objective of the four years of undergraduate training has not been clearly defined, say some, that there is present confusion. And in the absence of clarity on the objective, the undergraduate curriculum has increasingly become a battleground for the rival claims of the specialties. As advances are made in each of the various fields of medicine, and as the means of applying these advances to the actual detection and treatment of disease are developed, pressure is, of course, brought to bear upon the medical schools to include more and more work in each specialty in the ordinary curriculum and there are, as our correspondents freely point out, excellent arguments for doing this in almost every case. Only the limitation of the human brain and the limitation of the medical course—and of the period of human life—prevent the inclusion of all of these otherwise logical additions. Medical administrators have a difficult task in keeping in true relation various parts of the medical curriculum against the natural pressure in this direction or that. As techniques and procedures and treatments are worked out in this or that special field, it is indeed becoming a close question as to what is, after all, "basic" training.

The views of those who feel that the function of the college is to produce well rounded general practitioners, that special practice should always be the result of special preparation, not only in postgraduate training but also in postgraduate experience, and that the business of the medical school is therefore to concern itself with the needs of the general practitioner, leaving the aspirants for special practice, so to speak, to shift and to plan for themselves, are clearly set forth in many communications.

One writer, a professor of physiology in an approved medical school in the west, feels that the present difficulty in getting general practitioners to take up work in the rural sections is directly due to stress on special practice in medical education:

"Too much attention in the curriculum and teaching is being given to the specialty subjects and a less broad preparation for general practice is the result. Consequently, fewer graduates go into the general field in the rural sections of the country where they are needed; and through this inadequate preparation for a wide range in general medicine they are forced to send or take many of their cases to the cities, to their own loss and at a greater cost to their patients.

"Many of our best colleges are realizing this condition and are making efforts to correct this trend."

The dean of an approved medical school in the east points out that:

"There is need today for more general practitioners to consecrate their lives to human service, that practical sort of chap who can do a great deal of everything and much of it rather well. There is less need for more specialists, but more need for better specialists, to be produced through increasing opportunities for postgraduate training.

"If it is wise for us to place greater emphasis upon the training of men and women for general medical work, then more effort in this direction must be made through the student years in the medical school. The scientific urge can be

satisfied through the clinical approach and increasing emphasis should be placed upon the practical subjects without sacrificing in any way the advance of pure research."

The following illustrates a rather large body of comment:

"In the education of the physician we are today giving a good general background in the pre-clinical sciences and a smattering in the specialties from the viewpoint of the specialist; we are turning out general specialists, who often enter general practice and undertake the medical or operative treatment of any or all of the conditions to which man is susceptible. . . .

"Medical education should be reformed; the education of the general specialist should be replaced by the education of the family doctor; specialism in a limited field of practice should be restricted to those who, as a result of additional experience, education and training, have become qualified for such practice."

On the other side of the question there is a convinced group of writers who feel that the medical schools, in the long run, if not now, will have to admit that specialization is the logical basis of medical practice and that curricula will have eventually to be reorganized on this assumption. They feel, in fact, that the reform most urgently needed is that the medical schools should frankly concentrate on producing graduates proficient in restricted fields. The following, from a professor of internal medicine in an approved medical school in the middle west, reflects this point of view:

"I have long felt that medical schools should frankly state that they no longer desire to turn out general practitioners; that they henceforth propose to graduate men who are thoroughly proficient in a restricted field."

Another of those that feel that no physician can be proficient in all branches of medicine, that our present medical education tends to assume that he can be by giving him a smattering of a great many subjects, and that students should be allowed at least a certain latitude of choice in branches in which they are most interested, is a professor of psychiatry, in an approved medical school in the south:

"It would certainly be wise to allow the student in his senior year certain selective activity in the branch in which he is most interested. And this same selectivity should be allowed during his internship. . . .

"Every student who intends to do general practice or to take up obstetrics should have especial experience given him. As it is now, the student or intern who expects to devote his life to practicing ophthalmology has to have the same obstetrical training as the practitioner who expects to deliver numerous babies.

"The sooner it is realized that no physician can be proficient in all the numerous branches of medicine and that our present education tends to give him a smattering of too many subjects, the better it will be for the profession."

It may be that what is really being complained of by some of the correspondents when they stress overemphasis on the specialties is rather lack of balance than overweight, rather lack of coordination than too great volume. If the medical student is thrown off his balance by overattention to the specialties, it is claimed, he will easily right himself in the early years of his practice.

A clinical professor of medicine in an approved medical school in the west observes, in this regard:

"I would not allow pathology and other fundamentals to be debilitated by the clamor for more 'practical' instruction to produce the 'basic' doctor. The young graduate who feels that his preparation to take care of the 'eighty-five per cent of the more ordinary variety' was skimped (which in modern medical school clinic organization it is not likely to be) will quickly orient himself if he has acquired the habit of critical clinical analysis."

*Is the problem to re-define the general practitioner and to re-define his training?*

The fact that really needs to be faced, it is submitted, is the clear change in the nature of the doctor's functioning, a change directly due to the expansion of the field of science and the development of more and more specific methods of diagnosis and of treatment. A former president of the American College of Physicians, who was for many years a professor of medicine in an approved medical school, sets forth that the highly scientific methods of training are not a part of a conspiracy to displace the general practitioner but rather the means of relating him to the needs of the present time and to the development of medical science. Perceptive writers point out that the expansion of the field of medical science, the consequent necessity for specialization, the corresponding necessity for coordination of the work of the specialists, demonstrate the inevitability of the group practice of medicine, presumably centered in the hospital. Under such a system, consultation becomes a regular and not an occasional principle in medical practice. The family physician, the general practitioner in the form in which he survives in this group, will no longer be merely the "guide who will lead the patient to the consulting room of the specialist." He will become the coordinator rather than the invoker of consultants, the repository of final responsibility. The training of this type of practitioner offers the sternest kind of challenge to the medical education of the future.

### III.

#### VARIOUS SUGGESTIONS FOR REDUCING OR INCREASING SPECIFIC PARTS OF THE CURRICULUM

It is well to remind the reader at this point that the experts discussing medical education in "American Medicine" approach the subject from a particular point of view. They are not, that is to say, considering the medical curriculum in and for itself, with academic completeness. Their discussion of medical education in general is animated by the dominant realization that all plans for improving the distribution of medical care and lowering its cost must necessarily be related to plans for steadily improving its quality. Unless this is kept in mind, the suggestions offered in this chapter, for additions to the curriculum or for various changes in emphasis, cannot be kept in true perspective.

Obviously the discussion of the curriculum is not exhaustive. Many subjects in both laboratory and clinical work are touched upon but not fully discussed. We select here for particular comment four of the questions that, in this symposium, evoked liveliest discussion. They are:

1. Whether surgical instruction to undergraduates should not give way to other subjects; whether major surgery, in short, should not be treated as a specialty and the policy of teaching it to all candidates for a medical degree be recognized as the practice of a bygone age, and now obsolete.

2. Whether more time and attention in the general undergraduate course should be given to non-surgical obstetrics.

3. Whether psychiatry deserves a better place in the curriculum than it is generally accorded at this time; and whether the whole field of instruction in this subject is not badly in need of definition and review.

4. What is the true place of preventive medicine in the medical curriculum and what should the medical school contribute to the training of the public health officer.

1. *View that major surgery should be treated as a specialty.*

On the question whether major surgery is to be regarded chiefly as a "specialty," to be prepared for in postgraduate work, or as a claimant for more time and attention in the undergraduate course, the following from the dean of an approved graduate medical school in the south, is illustrative:

"Take operative surgery out of the medical curriculum; substitute obstetrics (for major surgery) and review of anatomy in the senior years, forcing those desiring to become surgeons to take another year in this branch in all its phases."

Little is gained, it is suggested, by ushering a group of boys into an amphitheater to spend an hour or two watching a skillful surgeon perform an operation. The spectacle does not teach them to do the operation, it is pointed out, nor, in the judgment of many, is there any reason why they should be taught to do it.

There is a good deal of clear feeling that the present position of surgery in the medical curriculum is a hangover from the old days when every doctor had to be competent in minor surgery, and able to take a stab at major surgery if no one else was by to do it. The medical curriculum, it is urged, still reflects the emphasis of this bygone day. The recommendation is that surgery be frankly classified as a specialty in need of a specific postgraduate training; the space now given to surgery in some medical curricula is considered to be badly needed for other more pertinent claims.

2. *The pro and con of more emphasis on obstetrics.*

At a recent conference held in Washington, January 17 and 18 last, on better care for mothers and babies, the Committee on Professional Resources, reporting to the Conference, said:

"Medical schools should recognize the need for improved teaching of the sound basic fundamentals of obstetric practice."

"American Medicine" reflects profound dissatisfaction with the present obstetrical situation throughout the country. Solutions, it is admitted, are not easily arrived at. It is, for instance, quite impossible to apply the suggestion

made above with reference to surgery; not so easily can obstetrics be cut out from undergraduate courses and relegated to the list of postgraduate specialties. The general practitioner, it is pointed out, now as in former years finds obstetrics a considerable part of his work. A number of writers are deeply impressed with the extent to which general practice tends to "radiate" from obstetrics. There is little logic, certain writers imply, in turning an almost universal experience into a subject of special practice.

In the chapter on medical education in "American Medicine" and even more, perhaps, in the chapter on specialization, there is no blinking the point that comparatively few general practitioners are qualified to deal with situations other than normal labor and that, in spite of this fact, they *do* deal with them. There is recognition of the obvious point that it is often not possible to tell whether the case at hand is to be normal or abnormal labor, and the call for exceptional skill comes when it may be too late to call in the skilled specialist in obstetrics. There is no assumption, certainly, that any change or reorganization of the medical curriculum to give more time and space to obstetrics will make it more possible to produce graduates who can deal with all or even most obstetrical conditions. The point made is a more modest one—that greater emphasis on obstetrics will make more men able to deal completely with normal forms of labor. Positive dissatisfaction with the present state of obstetrical competence is clearly expressed. High maternal death rates are ascribed to insufficient obstetrical competence in average practitioners. The following views are common. The first is from an officer of the American Academy of Pediatrics, clinical professor of pediatrics in one of the leading medical schools:

"The student is not given sufficient obstetrics in the average medical school and as a result the American profession has had called down upon it a great deal of criticism because of high maternal death rates."

A professor of internal medicine in an approved medical school in the middle west fairly summarizes the same general point of view:

"There should be more teaching of non-surgical obstetrics required in undergraduate education. This is to qualify the general practitioner; the teaching of obstetrical specialists is another question."

The third comment comes from a New England obstetrician on the staff of several Boston hospitals:

"I feel most strongly that obstetrics is the poorest taught and worst practiced branch of medicine today."

His suggestion, however, is for graduate rather than undergraduate training:

"Take obstetrics away from the general practitioner until he has qualified by special training. This probably could be most easily accomplished by requiring a special degree (the English system) which could only be obtained after at least a year's residence in one of these subsidized hospitals or other lying-in hospitals. An essential feature of these hospitals would, of course, be a pregnancy clinic.

"In rural communities lacking means of transportation the visits might have to be made to the patient's home—blood pressure, urinalysis and pelvic measurements, ante-partum and post-partum examinations. All border-line cases would

be transported to the hospital at the onset of labor. All serious emergency cases would be handled by an ambulance. It seems to me that such a system would serve three distinct vitally important functions: provide good obstetrical care for all, make the general public obstetrically conscious and, thirdly, educate the profession in obstetrics."

Most of the writers on this subject, however, are concerned with the undergraduate curriculum and the need of including more obstetrics there. A professor of obstetrics in an approved medical school in the south observes:

"Deans of medical schools should be made to realize that obstetrics is a major branch of medicine and deserves as many hours as medicine or surgery. Students must be allowed and made to deliver many women under constant and strict supervision."

Attempts are made, naturally, to say just how much obstetrics there should be in the four years of the regular undergraduate curriculum and to define the standards that graduates should reach before being declared competent to deal with the normal labor cases they are supposed to undertake in their general practice. There is no general agreement on the number of hours which would be given to obstetrics, or on the number of actual deliveries a student should be required to have made before graduation. Clearly, however, some writers feel that it would be quite possible to define in specific terms what a student should be able to do before he is allowed to practice obstetrics. One writer observes:

"I do not feel that a student should practice obstetrics unless he is able to rotate the head from posterior to anterior position. . . .

"At least he should be able to recognize the head in a posterior position so that he may call someone competent to deliver a child in such a position. However, in the rural communities the availability of such a man might be difficult so I think my first suggestion should hold good. . . .

"The practitioner should be able to recognize the various positions of the child and be able to deliver even though such positions would have to be changed."

One dean urges more and better work, "especially more hours in clinical practice," in the undergraduate course. Another, who says of his own institution that obstetrics is "well taught," nevertheless adds:

"We should like to improve our instruction by providing more immediate oversight of the student at certain points of his training."

This particular dean sets forth in some detail what he means by "well taught":

"In our sixth quarter (last third of sophomore year) students have a didactic course on normal obstetrics. In the seventh quarter they have work in the outpatient department consisting of pre-partal and post-partal examinations. During the same quarter the students attend home deliveries (average twelve) as assistants to senior students. Trained and experienced nurses also attend the deliveries. Only multiparas with expectancy of normal delivery are cared for at home. If labor does not proceed normally, the resident obstetrician goes to the case or the patient and attendants are transported to the hospital.

In the ninth quarter the lectures on abnormal obstetrics are given. In the eleventh quarter students attend home deliveries (twelve) with seventh quarter



students and nurses as assistants. During the same quarter, the students have an average of twenty-five patients (about five at a time) in the maternity hospital. These are primiparas or those expecting abnormal conditions of labor. The students are assistants at delivery and may do more or less of the physician's work.

"Thus each graduate participates immediately at from forty to fifty deliveries."

One group of writers feels that there is really no reason for deploring the present place of obstetrics in medical curricula. They feel that the general practitioner of the present day is no more called upon to have a comprehensive knowledge of obstetrics than he is called upon to be a competent general surgeon. They feel that the trend of obstetrical practice today is toward institutions; that poor and rich alike now look to the hospital as the desirable place for delivery, and that this fact certainly should influence the degree to which obstetrical training should demand time and space in the undergraduate medical course. It has been pointed out above that even with more attention to obstetrics in the present undergraduate course it is not to be expected that medical schools can graduate students as competent obstetricians. If an increasingly larger percentage of obstetrical work is to be relegated to the hospitals, obstetrics will naturally tend to become more and more a specialty. A professor of neurology in an approved medical school in the south reflects:

"Should a student spend added months in preparing himself to deal with a case of puerperal eclampsia when he may go through his entire professional life without ever seeing one?"

"I doubt the advisability of requiring every student in medicine to devote the time necessary to become really expert in obstetrics. In the first place, his expert knowledge may never be invoked in the course of a whole professional lifetime. In the second place, safety in this particular natural function is only very rarely dependent upon expert knowledge. If the student is taught, and every student should be taught, surgical cleanliness applied to the obstetrical chamber, then obstetrics would be shorn of the major part of its risks.

"Other obstetrical risks, such as eclampsia, hemorrhage, the practice of instrumental assistance in the most frequently occurring mal-positions, should be included in every course in obstetrics; and every student should have the opportunity to conduct at least twelve cases, under supervision, of course, before graduation. Further intensive study in this branch is unnecessary, I think, unless one is planning to devote oneself to this branch exclusively."

Some of those that do not think "further" emphasis is needed may already assume greater emphasis than, apparently, exists in all schools. Even this scattering correspondence indicates a notable variation in standards.

Of those that feel that the best—and safest—contribution the medical schools can make is to supply principles and "basic" knowledge in the obstetrical as in other fields is the former dean of an approved medical school in the middle west, a member of the Commission on Medical Education:

"Here at best nothing but the principles and the basic knowledge can be acquired. In the field of obstetrics what is in fact being complained of is that the public has come to understand that the problems of obstetrical care frequently require expert knowledge. In the light of present scientific knowledge

the general practitioner is no better qualified to deal with the unusual complications of obstetrics than he is with the unusual complications in any other medical field."

He goes on to say:

"It would be unwise in my judgment to carry medical education in obstetrics beyond the level now attained in other great branches of medicine and surgery. The conduct of normal labor is entirely within the capacity of the medical graduate of today.

"The conduct of abnormal labor and the management of complications is not within the capacity of the general practitioner and never will be. Here again the essential importance of close contact between the general practitioner and the specialists is clearly shown.

"To attempt to make obstetrical experts out of medical students is obvious nonsense."

### 3. *The place of psychiatry in medical training.*

A number of writers suggest that psychiatry is entitled to greater emphasis than it now receives in the general medical curriculum. This conclusion is reached, however, by several rather different approaches. One group would like to increase the amount of psychiatry in the general medical course on the theory that mental diseases are now more prevalent than most of us think, that many are allowed to progress to incurable stages because they are not recognized sufficiently early and that the general practitioner's diagnostic competence would certainly be advantageously furthered if he were more skilled in detecting signs of actual mental disorder.

Another group wants more psychiatry in the undergraduate medical course on the theory that more psychiatry will enable the student to deal with the total human personality rather than with the disease process. Other writers feel that this reasoning is fallacious. They admit the importance of stressing the total personality in medical education, but they feel that this is to be achieved by more common sense rather than by more psychiatry. As one or two writers put it, the study of abnormal states will not aid the student to deal more effectively with the total human personality of his patient.

In general, the weight of opinion, so far as the contributors of views on this subject are concerned, is that there are obvious improvements to be made in the teaching of psychiatry in medical schools and that more attention might well be given to the subject. This much can be said without entering into the highly controversial question as to whether more psychiatry will indeed enable the medical graduate to deal more competently with his patient on the basis of the whole personality rather than on the basis of the specific disease. The difference of opinion on this latter point, however, is so sharp that before taking up the specific suggestions as to the way in which psychiatry should be taken more into account in the medical curriculum than it now is, it may be in order to set forth the views *pro* and *con* on the question whether more training in psychiatry is or is not a means of enabling the practitioner to practice modern scientific medicine with greater effect.

A professor of surgery in an approved medical school in the east, a member of the American Surgical Association, analyzes the situation as follows:

"It is probably not excessive to state that seventy-five per cent of all the symptoms mentioned by patients are psycho-neurotic.

"About half of the actual diagnoses in the clinics of this country are given as psychoneurosis. By definition, a psychoneurosis is an emotional state which for some reason the individual cannot handle so as to gain satisfaction and it keeps disturbing him until he finally sidetracks it in some physical symptom.

"The experience of a number of us who see a great many mental and neurological cases indicates that among the ordinary surgical and medical ward cases a considerably greater proportion of the actual symptoms are of this nature. For instance, a person after an automobile accident will have some anatomical damage done to his brain, but in addition there will be superimposed many symptoms for which no organic basis can be found.

"Since many patients have the appendix vermiformis, the thyroid gland, or some other perfectly normal organ removed because of persistent psychoneurotic symptoms located in the particular organ, it becomes obvious that the general practitioner and surgeon ought to be familiar with this class of diseases. As a member of the American Neurological and the American Psychiatric Associations, I have joined my fellow members for years past in developing sane and adequate courses in psychiatry and neurology for all medical students.

"In our university we give, in the second year of medicine, an adequate course on the biological foundations of human behavior. In the third year we give a course in the development of abnormal mental states. In the fourth year we devote considerable time to demonstrating actual patients to the senior students and to guiding them in examining and treating patients of this sort. In addition to that, we invite to this hospital a small group of graduate physicians each year for postgraduate training in this class of diseases. . . .

"In the well organized hospitals that have departments of psychiatry and of neurology, year by year the proportion of patients from general medicine, surgery and other specialties who are referred to the psychiatrist and neurologist is growing steadily. Large numbers of operations and much futile treatment by drugs are thus saved."

Quite without reference to this concrete question as to whether the medical course should or should not offer more and more intensive psychiatric training, the contributors to "American Medicine" clearly make the point that the practice of medicine with too many present day practitioners takes far too little account of psychic, emotional and environmental factors as causes of diseases—organic diseases as well as functional. A former president of the American College of Physicians observes:

"One of the unfortunate things about the psychical aspect of man is that to so many men it is intangible. They cannot get the idea of there being anything medically wrong that cannot be seen in structural change. In order to overcome this it will be necessary for them to grasp the very important fact that there is a pattern to function as well as a form to structure. . . .

"If we can ever get to the place that medical men can grasp the fact that function has form, it will put us on the way to a better understanding."

A former president of the Association of American Medical Colleges points out in the same vein:

"Far too much stress has been placed upon the purely physical aspects of disease. During his training in the average medical school the student is apt to

get the impression that all patients have either organic disease or functional disease. When he gets out in practice he quickly finds that there are all sorts of combinations of these two conditions.

"Furthermore, the organic has been stressed in medical education at the expense of the functional. There has been a decided improvement in many of the better schools in this aspect of the situation, but there are still a great many schools where the old attitude prevails, and it is difficult to see how it can be changed until many of the older practitioners and teachers have died out."

A professor in an approved medical school in the east who heads the medical services of two hospitals provides a significant illustration:

"No careful student of disease can ignore its psychic aspects. Many functional disorders are of psychic origin, and I am convinced, as was Richard Bright a century ago, that functional disturbance may lead to organic change.

"In a great manufacturing plant I witnessed what was almost an epidemic of peptic ulcers following the introduction of the 'point system.' This problem of considering the psyche in relation to somatic disease is the chief thing which distinguishes the true physician from the veterinarian, who nowadays receives an excellent scientific training. Perhaps even the vets pay attention to it when they practice on dogs. My cocker spaniel will vomit if I scold him and thus disturb his moral peace with a sense of sin.

"A good family physician should know his patients well enough to take their psychological peculiarities into account, else he will lose half his opportunities to help them."

A St. Louis member of the American Academy of Ophthalmology suggests:

"We are just beginning to learn a few things of the somatic effects of psychic influences."

A North Carolina physician, FACP, testifies:

"If the diagnosis lies between a functional disorder and an organic lesion, it is hard for even the most honest man not to yield to the subtle temptation to decide in favor of the organic trouble and advise operation, rather than launch upon the long and tedious course of psycho-therapy necessary to uproot the more or less imaginary ailment.

"It is so spectacular to point an accusing finger at a curly appendix tip in an X-ray picture and tell an emaciated, overworked, highstrung little school teacher that her trouble is there, and that its removal will cause her to become strong, rosy-cheeked, and placid."

The following also, from a Seattle surgeon, FACS, on the staff of several hospitals, indicates the degree to which leaders in medical science are struggling with the complex interrelation of organic and functional disease:

"The person who is ill has not only a sick body that is failing to function in some of its parts, but also a sick mind. One cannot treat disease as disease alone, but must consider all of the contributing factors of that illness, as, social conditions, family conditions, and the ideas and problems which are being turned over in the patient's mind.

"These latter often require just as much if not more correction than the physical malady, which is often self-limiting and self-eradicating."

Some writers who have made practical progress in relating mental and somatic factors in disease, point out that even when the relation is understood, the therapy remains an almost insoluble problem. A number of practitioners

point out that they recognize the psychic nature of the disorders for which they are offering treatment (even surgery), but that two essential reasons prevent attacking the disease on the psychic base. The first of these is the patient's disinclination. Not infrequently a patient would prefer to undergo an operation than to take on the burden of making, himself, a mental adjustment. Moreover, even when the doctor in such cases could function helpfully, he cannot find the very considerable amount of time that would be needed. One western practitioner says that he often realizes that he could influence a given situation in which psychic rather than physical factors control, but that assuming that the patient would welcome the "treatment," there are not enough hours in the doctor's day to permit it. He adds:

"I am thoroughly discouraged with this type of work. It saps my energy and takes my time; people are unwilling to pay for it; and people of the type that need it are notably lacking in the insight to see what is being done for them."

A southern internist, former governor of the American College of Physicians, points out how little doctors in general (including those least respectful of psychiatry) are aware of the degree to which psychotherapy enters into their own present functioning:

"Doctors in general are little aware of the fact that three-fourths of their time is taken up with psychotherapy. They do not realize how little success they would have as practitioners if their work were on a purely veterinary level. They fail in clear understanding of the fact that to know men, to know how to deal with men, to know how to guide, encourage, counsel men, means psychotherapy."

"To exploit men's fears and ignorance, to acquiesce in their delusions, to make profit from their grief and anxiety is also to be reckoned as psychotherapy, and it is this low type of psychotherapy that has besmirched the whole conception of psychological healing and has led doctors into the delusion that all they do is to practice medicine."

(The above occurs in a passage in which the writer says that doctors are disposed to regard psychic values as lacking in reality.)

"Sociologists naturally do not know just where veterinary medicine ends and psychotherapeutics begin. In fact, the two are so interwoven that a sharp demarcation is impossible. Diabetes may be properly and effectively treated on the veterinary level, but the problem of educating the patient into such constancy to his regime that he will not abandon it and sink into coma is a psychological problem of such importance that it is upon this, chiefly, that the success or failure of treatment hinges."

"Successful physicians are those with such mastery of psychology that they can secure cooperation in the execution of their therapeutic plans. Yet it is very evident from the tone of most lay writers on medical problems that they conceive the distribution of medical service as being purely at the veterinary level. . . .

"I have obtained great hope from the movement now being initiated of teaching students psycho-biology at a very early point in their education. . . .

"Doctors, poor things, don't know what they are about half the time, do not realize that the measures they so earnestly prosecute are in reality psycho-

therapy, as witness an example gravely cited in 'Time' last week—a girl cured of hysteria by a laparotomy, a crude, but in this case, effective, form of suggestion. . . .

"I have preached that a large part of the surgery done has no other than psychotherapeutic value and that a great deal of the drugging is purely *ut aliquid fiat*. I have tried to persuade people that they should study psychotherapy and practice it consciously.

"I am not sure that I am right about this, however. When I see a doctor curing his patient with inert drugs and needless surgery, I fear that if his faith in all this were undermined he would not be able to proceed with the conviction that heals. He probably would not have the aptitude for employing a less dangerous but more intelligent form of psychotherapy. Perhaps in another two generations things may be better."

A practical consideration, it is suggested, affecting the practitioner's disposition to call in the psychiatrist, is the dearth of experts in the field—and the extreme danger of invoking the incompetent practitioner. This field has been so exploited, moreover, it is maintained, by the incompetent, that confusion exists even in fairly well informed circles as to who are the sound and who are the meretricious exponents. A professor of neuro-psychiatry in an approved medical school in the south says in this regard:

"Self-styled psychologists and mental hygienists are rampant in the land where syndicated newspaper articles spreading false or pseudo-information advertise them, and well intentioned but misguided individuals, organizations or foundations support them. Many poorly controlled and sex obsessed social workers spread unwarranted information and frequently suggest the undesirable traits they are supposed to combat."

A number of contributors in the field of psychiatry devoting a considerable amount of space to defining what goes into the making of a good psychiatrist, suggest that:

He must be an M.D.

He must have some experience in internal medicine, or in pediatrics, before he enters the field of psychiatry.

He should have some neurological experience.

He should have wide experience in psychiatric clinics—with inpatients and outpatients.

He should have a solid foundation in affiliated sciences (neuro-anatomy, neurology, pathology, sociology, anthropology, psychology).

One competent writer holds that three years of strict psychiatric training is the very minimum under all conditions, and that specific training and experience are particularly necessary, if the psychiatrist wants to specialize in child psychiatry, in psychiatric teaching, psychiatric practice, psychiatric service in connection with courts, etc.

Illustrative of the concrete ideas as to the degree and the ways in which psychiatry should be included in the undergraduate curriculum, are the following, the first from the dean of an approved medical school in the east:

"This subject is so important that it may well be treated by special courses in every year of the medical curriculum, beginning in the first with medical psychology, followed in the second year by psycho-pathology, and later, by a



study of the neuroses and psychoses and clinical psychiatry. Some of these courses, particularly during the first two years, may be placed on an elective basis, to save an already overburdened curriculum of required work."

The second is from a former president of the American Psychiatric Association who cites departments of psychiatry that offer instruction during each of the four years of the medical course:

"Much may be expected from courses in which practice and theoretical instruction are combined in producing physicians who will be much better prepared to understand and deal with psychiatric problems in medical practice than their predecessors have been. . . .

"Short courses in psychiatry given to physicians who have had no previous training and experience in the subject are not regarded favorably by most of the psychiatrists engaged in medical education. An effort is being made, however, to bring psychiatric service into all departments of medical study and practice in the general hospitals, especially in the hospitals connected with medical colleges. At both Cornell and Columbia medical centers, psychiatric service of this character is provided and is being extended.

"At the New York Hospital-Cornell Centre two full time psychiatrists are assigned to the pediatrics department. Two part time psychiatrists provide regular service for the other medical and surgical departments. Four psychiatrists are assigned to the medical and surgical outpatient services. Additional service is also, on occasion, furnished to other departments by the resident staff of the Payne Whitney Psychiatric Clinic of the Hospital.

"This cooperative service is of distinct value in bringing psychiatry into the study and treatment of patients throughout the hospital and outpatient services and in advancing the understanding and skill of the resident and attending physicians in regard to the psychiatric aspects of their patients. . . . The service is, we believe, making a substantial contribution to advancing the psychiatric education of pediatricians and medical students. . . . A similar development is occurring at the Columbia-Presbyterian Centre, and at some other hospitals and medical colleges."

The work at Cornell, of which he speaks, is officially described as follows:

"The Department of Psychiatry offers instruction during each of the four years of the medical course. The science of the functions of personality, psychobiology, is considered of fundamental importance as the groundwork for future clinical training.

"A series of lectures in the second year will orient the student in personality disorders and in the methods for their examination and study.

"In the third and fourth years this preliminary training will be utilized in the study of patients at the Payne Whitney Psychiatric Clinic and at the Manhattan State Hospital.

"In the third year the student will be instructed in the methods of examination and will be acquainted with the most important psychiatric reaction-types.

"In the Out-Patient Department, during the fourth year, he will participate in the study and treatment of the diverse problems presenting themselves in the general psychiatric consulting practice. Through instruction and practical work at the Manhattan State Hospital he will gain an understanding of a wide variety of mental disorders of various stages and especially of the organic type. The importance of personality issues in general medicine is taught in the med-

ical wards of the New York Hospital and in the Outpatient service of the Payne Whitney Psychiatric Clinic. Clinics are planned to unify these many activities and to offer in addition a broad understanding of treatment and investigation."

A number of views indicate a feeling that the teaching of neurology and psychiatry has advanced in strides within the past few years. In most medical schools, says a professor of neurology, "the student is taught in these branches in some form through all four years." Allowing for a wide variation in view, it may fairly be said that the contributors to "American Medicine" supply a healthy amount of testimony to the effect that the ancient idea that psychiatry is "all moonshine" no longer holds either in the medical world generally or in the medical schools.

We have already mentioned the qualifying view, in some cases amounting to a protest, of those who feel that it is dangerous to assume that the need of training students to deal more competently with the total personality of the patient is to be met by more training in psychiatry. Illustrative of this view is the following observation from a former dean of an approved medical school in the south:

"I should regret very much to see the undergraduate curriculum invaded by psychologists and psychiatrists. If there are now any students leaving the medical schools possessed of such little knowledge of the influence of psychic or emotional upsets, whether of hereditary or environmental origin, or normal and pathological processes and haven't enough common sense to use this knowledge in their daily work, I am quite sure they will not be benefited by any attempts to give them a 'psychiatric approach' in the schools."

A member of the American Psychiatric Association points out that perhaps the very formulation will defeat its own end:

"for even the psychiatric approach will still lead the medical men to study the case as a subject and not necessarily as a human entity."

The medical man's ability to deal with the whole human personality and not merely with bodily disease must, it is maintained by some, come from experience and can hardly be achieved by any imaginable planning in medical education. The dean of an approved medical school in New England, whose interest lies especially in the psychiatric field, observes:

"This is not a question of psychiatry any more than your work or the work of the President of the United States is psychiatry.

"It may be assumed that all of us have an interest in human beings, but it seems to me absurd not to consider this interest part of any medical specialty. Nothing could be more important than for a doctor to appraise correctly the personality of the patient with whom he is coming in contact.

"Spending more time with insane people or hearing more lectures on speculative philosophy will not, I believe, increase this insight."

There are those who feel that the truth lies somewhat between these two schools of thought. They feel, it is true, that studying psychiatry will not enable a man to be outstanding in the "art" of medicine or to deal competently with the whole personality of the patient. It is nevertheless a useful part of his

preparation and there should be more of it than there now is. The psychiatric director of a group of New York hospitals somewhat fuses the point of view of these groups when he says:

"Psychiatry must be given a large place in the education of medical students and physicians. It should be looked upon as a form of medical thought and practice, rather than an isolated specialty."

On the other argument for more psychiatry in medical schools—the need of qualifying the general practitioner to recognize scientifically the early evidence of mental disease to a greater degree than he now does—there is little difference of opinion, but the point is not extensively discussed. A Nebraska pathologist, FACP, thinks it should be admitted as a matter of course that

"Psychic disorders ought to be recognized and treated by the general practitioner, both in order to be reached early enough so that there is hope for recovery, and because there are more of them than the specialists could possibly handle. Now, too many of them are being treated by appendectomies or physical therapy or intravenous injections. . . ."

A California professor of psychiatry comments on the amount of money (usually the state's money) that might have been saved and the degree to which human productivity might have been preserved if there were more general ability to recognize, *in an early stage*, certain types of mental derangement. If the general practitioner is indeed the key man, as some of our correspondents believe, in this matter of early detection of obvious signs of important mental disorder, then what our California correspondent has to say here is significant:

"It has been established by eminent authorities in Germany and England and this country that:

"a. Dementia praecox may be discovered comparatively early in life.

"b. When discovered during the period of childhood it offers reasonably good chances for recovery but the percentage of recovery rapidly diminishes with the age, hence the duration.

"c. In the average it is maintained by the same authorities that, conservatively speaking, fifty per cent can be prevented by correct and early training.

"Applying this other specialist's experience to my own early professional work, one would be justified in saying that the state mentioned might have saved approximately \$850,000 in the cases I have observed had correct and prompt prevention work been done sufficiently early. This would mean generally some years before the actual breakdown.

"The maintenance and care of a child showing constitutional pre-disposition to this type of mental disease, giving him ample care to effect recovery, would not exceed about eight to nine hundred dollars per year. In many cases one year or one and a half years of treatment would be sufficient to bring about restoration to normal biologic and social adjustment.

"This is merely one type of mental disease. Somewhat similar statistics pertain to other types of mental derangement. . . .

"To me who have been forced to see the slow, but dreadful mental deterioration of these young people who constitute about one-half the patients of every state hospital, the humanitarian side is naturally much more important than the losses in dollars and cents. Yet both should be seriously considered even by the politician. I trust that some one more able than I will take up this very large problem as a part of the general effort to improve and better maintain the health of the human race."

4. *The place of preventive medicine and training for public health work in the undergraduate curriculum*

The weight of opinion favors a more effective incorporation of the preventive principle in all divisions of medical work and medical training. There are frank references to the insufficiency of the courses in preventive medicine now included in the undergraduate curriculum and to their lack of integration with the medical course as a whole. In most schools the courses in preventive medicine still seem to students something quite separate—and definitely dull, connoting uninspiring trips to sewage outlets and milk plants. The courses in preventive medicine are, by and large, still far from being an integral part of the whole conception of medical science and training.

A creative understanding of preventive medicine is the influence, certain writers believe, that is bound to reorganize the medical curriculum radically in years not far distant. A change in the conception of the purpose for which medical science should be used is even now, in the view of many, long overdue.

By and large the medical curriculum is still based upon the ancient conception that there is a fixed boundary separating preventive and curative medicine and that curative medicine is the main function of the doctor in training. A conception that the highest use of the benefit of medical science and medical research lies in preventing disease cannot fail sharply to revise medical curricula and to redistribute emphasis.

Certain writers in "American Medicine" point out in this regard that medical schools now—with a few striking exceptions—are reflecting rather than forecasting the fundamentally changing conceptions of the scope and purpose of medical care. A professor of medicine, who was for many years dean of an approved medical school, in what is in a manner a valedictory pronouncement, makes explicit this conviction:

"No real improvement in the distribution of the essential services that modern medicine can render can be hoped for until the medical schools train their students to see and understand what all the health needs of individuals and of communities are, until students are taught to know how to provide and how to administer all the preventive, curative and social services available for community and individual needs, and are made to understand how to integrate these services to use all the social resources of any community at any given time. . . .

"Fundamentally, then, before any effective mechanism can be set up to distribute the best available medical service in the best way, much must be done to reform the education in social responsibility of the medical profession and to get to the general public a clear idea of how great and how valuable are the curative, preventive and hygienic services that properly organized medical arts can bring to benefit the community. Obviously, such education will be very slow in ripening."

A member of the National Board of Medical Examiners, with particular training and experience in preventive medicine, says, in defining the present need:

"Much has been accomplished (in the way of developing cooperation between the medical profession and official public health agencies) but this result

cannot be satisfactorily obtained without the development of better facilities for teaching preventive medicine and public health in our medical schools to undergraduate students."

Is training in public health work to be a specialty? Should it be provided in schools of public health apart from the medical school? Or must it, in the logic of the situation and of the need, be correlated with the training of the practitioner?

Whether or not definite preparation for public health work is to be given in the regular medical course, there is clear conviction that a better understanding of public health work and of preventive medicine as a whole must be included in medical education and in a pervasive and integrated form.

An officer of the American Dermatological Association, professor in an approved medical school, says, on the question of teaching modern methods of prevention and control:

"A practical public health and social policy will, I believe, be obliged to insist in one way or another upon much more attention to preventive as distinguished from merely curative thinking in the education and practice of doctors.

"The natural place at which to begin this sort of activity is, as a matter of fact, in medical teaching within the medical schools themselves. If they live up to their full responsibility in teaching preventive medicine, I am sure that the amount of pressure necessary from external sources at least on the newer graduates can be reduced to a minimum. . . .

"The overhauling of medical schools with reference to venereal disease teaching and the creation of demand by better education as to need is a first step."

That the *whole* question of the relation of preventive to curative medicine must be constantly implied is the conception animating a past professor of pediatrics in New England when he pleads for

"the inauguration in our medical schools of the study of health itself."

#### IV.

##### TEACHERS AND TEACHING IN THE MEDICAL SCHOOLS

In the discussion of teachers in medical schools there is the expectable preoccupation with the question of full time or part time teachers, and the familiar arguments on both sides are brought forward.

Perhaps the nearest approach to a conclusion, in this correspondence, is the feeling that the proper balance should be maintained between the full time and the part time teacher and the conviction that the teacher, whether full time or part time, shall have a dominant interest in teaching ("at least while he is teaching") and outstanding competence in conveying his material to the men in his course—and not merely a reputation in his subject.

Against the full time teachers are adduced the familiar charges that they are too likely to be cloistered individuals, remote from the situations that condition an active practitioner's work; that they are responsible for the emphasis

on laboratory procedure; and that they are often men whose intellectual tendencies and preferences, and indeed whose competence, have never received a healthy challenge.

As to the part time teacher: it is suggested that the "famous specialist" teacher often has no particular gift for teaching but is interested in a "university connection"; his reputation may be more or less fortuitous, the result of excellent promotion either on the part of himself or another; and while his students may be interested in "sitting under" a man "with a great name" they do not always derive from the instruction much that is of substantial worth. The part time teacher, it is suggested, has a tendency to be interested in bizarre conditions and dramatic cases—to the appeal of which students are swiftly responsive; his demonstrations are often brilliant, but whether they contribute in a continuous way to a developing and unified conception of the subject in the student's mind is another matter. He throws off sparks for a few hours each week, hoping they will "catch" but not feeling any particular responsibility for making sure that they do. There are more than a few references to the teaching tradition in some places whereby the best teacher seems to be the man that puts on the best show. A past professor of medicine in an approved medical school in New York conjures a picture when he pleads for the kind of training

"not intended to add too much to the glory of the members of the faculty by the demonstration of rare conditions."

In general, there is a certain amount of feeling that the increased—and necessary and desirable—emphasis on clinical teaching may nevertheless be responsible for a difficulty that calls for adjustment, i.e., a lack of correlating influence throughout the later years of clinical work. The moot question as to how a great variety of specific information can be integrated into a broad philosophy, a clear diagnosis and a unified treatment, is touched upon as a matter of fundamental concern by several men whose connection with the whole field of education has sharpened their perception of this need. On this point the dean of an approved medical school in the east says:

"The students see the patients studied from the standpoint of the specialist rather than from the standpoint of the cooperating group, whose total findings are built up by diagnostic integrators into diagnoses for a well directed therapy."

There is a perceptible present tendency to revert, in part, to the lecture in fields in which it was once discarded. Perhaps, it is argued, a little more of the didactic method, a reintroduction of lectures, might greatly increase its value in the latter part of the course.

The suggestion from a professor of neuropsychiatry in an approved medical school in the south that "medical teachers should be selected with more of a view to their teaching qualifications" certainly introduces no new principle, but it is plainly a point for which there is some endorsement in these letters. Great teachers, however, as the writer of the above points out, are not easily found:

"It is difficult to develop a great, inspiring, broad-thinking clinician among those who are reared in a medical college on a salary."



On the matter of present difficulty in "manning" medical schools with the type of men that are needed in all branches, it is in point to quote from an associate professor at the Harvard Medical School:

"There is at present a crisis within the universities, as there is in industry, agriculture and politics. As university posts become vacant in this and other countries, one frequently hears that there is a dearth of suitable candidates for these positions. Is it that the younger generation is intellectually unfit?

"Is it not more probable that during the past quarter of a century or so universities have encouraged ultra-specialization and have rewarded narrow accomplishments, with the result that now, when new and broader standards have been established, it is difficult to find men who represent them?"

The contributors to "American Medicine" have made it abundantly clear that in medical training, as in medical practice, the dominant need is for integration of various forms of specific information—in the interest of the patient. What the medical graduate must, above all else, be competent to grasp is that, as one of the present writers puts it, the fact that the patient has a disease must be regarded as at least as important as that a particular disease has the patient.

There is obviously a considerable amount of present dissatisfaction with the present tendencies toward isolating specific forms of training. An instructor in orthopedic surgery in an approved medical school in New England sums up the situation thus:

"All our teaching of the past decade or more has been about diseases, their etiology, diagnosis, complications, etc., and if there is a specific therapy, like insulin, vaccine, serum, or endocrine therapy, the results of such treatment are minutely described.

"But, if all tests and laboratory findings are negative, and no diagnosis has been made, and there is no excuse for any of the above treatments, or a surgical operation, or if an exploratory operation seems advisable and proves negative, the profession has little to offer except the so-called supportive treatment, or to turn the patient over to the psychological department.

"It is no wonder, therefore, that the patients tend to get discouraged and to drift away from the regular profession. If a person is sick or below par for a considerable length of time, he wants something more—when he knows he is not well—than to be told that, from the best that science can tell, there is nothing the matter with him."

The real appeal of quacks and cultists, as medical writers here frequently realize, lies in the fact that with all their bunkum, they often show nevertheless a greater interest in making the patient comfortable than does the orthodox physician. Several of the older men in the clinical teaching field point out the tendency of competent young graduates to feel that no action at all is required of them if the disease does not classify. A former president of the American College of Physicians, a professor of clinical medicine in an approved medical school, points out that:

"Scientific medicine, when it once fully appreciates the importance of functional pathology, will be able to give a service that it has never been able to give before, and one that is far more scientific than the one that was based on structural change alone. When we once fully appreciate that a physiologic

disturbance, brought about by emotional stress, is just as important to understand as a disturbance in function brought about by a structural change, then medicine will rightly demand a greater confidence than it ever enjoyed before.

"This physiologic basis of medicine presupposes an acquaintance with the facts which we have developed in the past. Anatomy, pathology and bacteriology are all extremely important, but we now add to this the physiologic conception which recognizes the nature of each patient's functional balance. Now we understand that no two individuals have the same ability to withstand stimuli whether they come from without or within; whether they arise in emotional centres of the body or in the structural change of organs."

There are hopeful historians and prophets who, reviewing the "anatomical" and "pathological" and "chemical" eras in medical education, feel that we have now worked through the periods of separate emphasis and have entered upon a more unified understanding—as a result of which the medical schools will produce students with a clearer realization that their responsibility is rather the patient than the particular condition.

## On the Training of Medical Students in Preventive Medicine

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Comparison of the announcements of the various medical schools of the United States and Canada indicates a wider divergence in the teaching of preventive medicine and public health, with respect to nature, scope and time allotment, than apparently exists in relation to any other subject included in the curricula. It has occurred to us, therefore, that a brief summary of such a course, as developed at the University of California Medical School may be of interest.

The course in preventive medicine, being planned as part of the regular medical school curriculum, does not aim at theoretical completeness of knowledge but rather at a practical sufficiency for the effective meeting of ordinary situations. So far as the average student is concerned, the general purpose of his training in preventive medicine is to develop him as a friendly advisor sensitized as to the maintenance of health in persons, families and institutions and as a cooperative and efficient colleague to the health officer, whose front line scout the law requires him to be—the first to see and the first to apply appropriate protective measures.

### SCOPE OF COURSE

In the scope of the schedule, the effort is made to include, at least, the high lights of all the major factors entering into the public health equation. This is a basis for the progressive education which, after graduation, the practicing physician may be expected to maintain from current professional literature. The quality of individual competency is, of course, a variable, depending on the relative concentration of professional interest pertaining to community health work or to the practice of some of the clinical branches. Those who may desire to make public health work their function in professional life will need postgraduate training in this very inclusive and difficult specialty. As a career, public health work seems to be appealing to a constantly increasing proportion of students. It is significant that during the past year, about one in eight of those qualified applied for recommendation for appointment to internship in the Marine Hospitals of the Public Health Service, with a view to appointment to permanent commission as officers in that service.

### A THREE YEARS COURSE

Instruction in preventive medicine is begun in the first semester of the second year, prior to the student's introduction to clinical medicine. Further pro-

gressive courses in preventive medicine are carried out in the second semester of the third year and the first semester of the fourth year. We are aware that the presentation of this subject is delayed in various other medical schools until the third and fourth years—or even to the fourth year only—nevertheless, the principle followed here is that the student should become prevention conscious as early as possible. While such others may feel that second year students have not sufficient medical knowledge to do justice to the study of preventive medicine in advance of some understanding of clinical diagnostics and therapeutics, our own conclusions, based on a number of years experience, are that second year students are quite competent to grasp, formulate and apply the general principles having to do with communicable disease control. Even if this early instruction comprises little more than what should be general knowledge of the laity in respect to disease control, its presentation at this time in a systematized manner furnishes an effective basis for the broader and also more specific application of the measures of preventive medicine to be taken up later in the course. It is submitted that the student does not have to be able to diagnose and treat a case of typhoid fever in order to understand and apply the appropriate measures for the protection of the community against this disease, if the diagnosis is furnished him; and when later he takes up the clinical aspect, he has the basic understanding that the welfare of the patient and the protection of the community should go hand in hand.

#### ALL DEPARTMENTS TEACH PREVENTIVE MEDICINE

Instruction in preventive medicine is not carried out by this department alone, but is expected to be amplified by the several clinical departments, using clinical cases as foci around which to illustrate preventive and sociological problems involved. The repetition of a few simple questions as to cause and effect will tend to impress the student with the relation of the patient and of himself to public health. Such questions might merely include: Where did the patient get it? From whom did he get it? When did he get it? How might it presumably have been avoided? To whom has there been apparent opportunity for transmission? What steps have been taken to prevent further transmission? What precautions have been taken in the handling of contacts? Taught in this way, instruction in preventive medicine, even though some of it is only incidental to the primary purposes of the clinical teaching, becomes pervasive through the entire curriculum instead of being restricted as to time and opportunity under a single specialized department.

#### NATURE AND CONTENT OF COURSE

Lectures are primarily devoted to the presentation of principles, and so far as possible their practical application. The general principle is borne in mind that abstract knowledge by itself is of no value, and that it only acquires usefulness when it is applied. The lectures are supplemented by the issue to each member of the class of numerous bulletins, brochures, charts, diagrams, etc., pertaining to the subject under consideration. Publications of the Board of

Health, State of California, are so issued and become part of the permanent reference files of the student, either from the standpoint of professional information on the subject or that of the state administrative health requirements. During the three years course, about fifty such informative items are issued to the student. In the conduct of the lecture course, the advantage of having guest speakers in subjects in which they are recognized specialists is not overlooked. Such invitations are limited to certain special subjects scheduled in the third and fourth years.

In the second year, the course in preventive medicine relates chiefly to the causative agents of communicable diseases—their destruction, the isolation of their foci, and measures for immunization against them. To this end, the instruction in preventive medicine correlates with that of the department of bacteriology and its laboratory course on micro-organisms in relation to disease; and, so far as practicable, the two courses are conducted in appropriate relationship and sequence. Thus, for example, the laboratory instruction on the diphtheria bacillus is promptly followed by information by the department of preventive medicine as to the basic principles and applicatory methods of diphtheria control.

#### COURSE IN BACTERIOLOGY

The course in bacteriology includes lectures and laboratory work, in which preventive medicine is considered both directly and indirectly. In the lecture work, technical preventive phases constitute a chapter in the consideration of different diseases; immunity is stressed as a subject, and as it concerns the use of preventive biologic products; water, sewage, milk and food are considered carefully, as well as the action of disinfectants and their limitations. These topics are supported throughout by laboratory work, which includes water and milk analysis, testing of disinfectants, typhoid, diphtheria and smallpox immunization, Schick tests, and all public health laboratory procedures. The laboratory work, in general, is divided into three phases: the first concerns general background and technic; the second concerns a study of pathogenic organisms and their reactions; the third consists of specimens both clinical and those found in public health laboratories. For the sake of the student the so-called courses in bacteriology and in preventive medicine are closely integrated with the latter phase composing about one third of the course of nine units of work.

#### SPECIFIC COURSE IN PREVENTIVE MEDICINE

The specific course in preventive medicine includes: personal hygiene; general principles of disease control; disinfection; disinfection; technique in handling contagious cases; the reportable diseases; health laws; the general principles for control of the respiratory, alimentary, inoculation and contact infections. All the major infections are touched on, and certain important individual diseases are discussed in appropriate detail as being representative of their respective groups as a whole.

During the year, and at the end of the course, students participate in oral and written exercises of the "problem type," i.e. each student is required to apply to a specific problem the principles previously discussed.

In the third year, the continuing instruction in preventive medicine is resumed in the second semester. At this time, the class has completed more than five hundred hours of instruction in general medicine, and is especially being brought into professional contact with diseases of a communicable nature. Along with the clinical study of such cases, the students are expected to consider the latter from the standpoint of prevention and the protection of the public health, the basic principles of control having been taken up in the second year.

The course in this year deals primarily with the general factors of environment in relation to disease and public health; and with the mechanism for public health administration and its application. The schedule includes the subjects of insect and animal vectors of communicable diseases; insect and rodent control; the organization and function of municipal, state and Federal health services; applicatory use of vital statistics; diseases of nutrition; food laws and food standards; ventilation; heating; lighting; water supplies and their purification; sewage and its purification; garbage and refuse disposal. In supplementary addition, the department of the history of medicine integrates two lectures devoted to the development of preventive medicine as a professional specialty.

#### FIELD WORK

Besides the classroom exercises above outlined, the course includes several field trips to various utilities and facilities pertaining to these exercises, under the general principle that the demonstration of a sanitary process in operation is a more effective way of imparting information than merely to discuss it. Our school is, perhaps, fortunate in the convenience and completeness of utilities appropriate for such demonstrations. Within a few blocks are modern plants equipped to demonstrate the most approved methods for the handling and pasteurization of milk and the preparation of ice-cream and dairy products. Only a short drive away is the Swift and Company abattoir, which not only gives the students a complete demonstration of meat processing and the comprehensive methods of meat inspection, but also offers a very complete display of animal pathology.

The field trips also include a visit to a modern sewage purification plant, operated on the "activated sludge" principle and having a rated capacity of about one million gallons a day. This is in efficient operation in Golden Gate Park, about a mile from the school and hospital, and includes the sewage of these institutions in respect to purification and disposal. The class also inspects the water supply of the Presidio military reservation, a few miles distant from the school. This has a constant daily flow of about one million and a half gallons, of which about two thirds come from surface springs and the remainder from driven wells. In respect to processing, this water system demonstrates the complete handling of a municipal supply in miniature. Less than one mile distant,



the plant demonstrates surface collection and piping; the use of deep pumping wells; dosage with alum; the operation of settling tanks; rapid sand filtration; underground storage; chlorinization; qualitative laboratory methods; pumping to a high line reservoir; control of algae and seagulls; and distribution flow by gravity.

#### ROUNDING OUT IN FOURTH YEAR

Instruction in the fourth year is by lectures, problems and demonstrations. The general course includes both the broader and also the more specialized phases of preventive medicine. Some of the major subjects considered are: degenerative diseases and periodic physical examinations; climate in relation to disease; tropical hygiene; rural hygiene and sanitation; making sanitary inspections and sanitary surveys; the general principles involved in epidemiologic investigation; their application in a progressive series of epidemiologic problems; industrial hygiene; mental hygiene; infant and maternal mortality and hygiene; unofficial health organizations; the relation of insurance to public health; medical sociology. The course is terminated by an examination covering all phases of the subject.

Through the kindness of Dr. J. C. Geiger, Director of Public Health for San Francisco, each member of the fourth year class has the privilege of observing the routine operation of the city health office. The students report there in groups of four or five, and remain during the working day. They are progressively taken through its component departments, and have the operation of each department demonstrated and explained. The scheduled program includes: Organization of the department as a whole; child health; control of communicable disease; public health (field) nursing activities; vital statistics; discussion of medical, dental, and nursing services; food and restaurant inspection; housing inspection; plumbing and gas appliance inspection; dairy and milk inspection; industrial hygiene; final summary and discussion. This field trip, coming as it does at about the end of the three years course in preventive medicine, is a most valuable practical demonstration of the operation of a well organized municipal department of public health. The students enjoy this and benefit by it. Their clearer understanding of the purposes and methods of health departments results in a higher sense of their personal cooperative relation toward the latter when graduated into medical practice.

#### TEACHING OF EPIDEMIOLOGY

An outstanding feature in the course in preventive medicine during this last year is the teaching of epidemiology by applicatory problems. Epidemiology, taught in the abstract way, is a dry, uninteresting subject. Interest in it, however, and a clearer understanding of its problems and the technique of their solution, may be aroused by the method and scope of its teaching. This is done by vivifying its situation, through the introduction of individuals as "dramatis personae" over successive phases of epidemic development. The method followed is much like that of the army "war game," in which an initial contact may develop into a major engagement.

Applied epidemiology is taught by problems presenting a series of sequent and coordinating situations concerned with the public health. Each situation represents an integral phase, and is outlined briefly on a lantern slide, which is reflected on a screen. The class has about one minute to study it. One student is designated as health officer, and is allowed about one minute to formulate what he believes is an appropriate answer. Another student is named as alternate, and is given about one-half minute to comment on what the principal has said. This alternate may be told to function as the pathologist, clinician, or laboratory man—or even on a non-professional status, as the mayor, representative of the Chamber of Commerce, etc.—and encouraged to ask questions of the principal pertinent to the solution of the current situation. The matter is then thrown open to general discussion by the class, a minute or so being allowed for this discussion.

The next slide reflects what may be regarded an acceptable, though brief, answer to the foregoing situation, and comments by the class are invited.

The average problem comprises a sequence of a dozen or more progressive and correlated situations, requiring a full lecture hour for solution. The time factor imposed requires the student to think rapidly as well as accurately, and moves the problem along steadily to its solution within the period available; while the changing phases of the problem hold the interest and attention like the developments of a mystery story. As the teaching of epidemiology by this method, with a sample problem, was described by one of us in the *Journal of the American Public Health Association*, August, 1935, its detailed procedure need not be gone into here. But, it is gratifying to know that since the publication of this article, this method has been tried out and reported on very favorably by the departments of public health in a number of other medical schools.

The climate of the Pacific Coast presents wide diversities, ranging from the arctic temperatures of the high Sierras, in winter, to the dry, intense heat of the great valleys in summer. From the results of such differences, the epidemiologic study of a number of diseases of interest from the viewpoint of prevention, is close at hand. For instance, sylvatic plague is prevalent on the western plateau and coast; malaria, in certain restricted areas of the great valleys and the incidence of many of the reportable diseases come to the attention of students of preventive medicine throughout the year.

## Correlation of Scholarship in the Arts College with Scholarship in the Freshman Year in Medical School

FRED C. ZAPFFE

Secretary, Association of American Medical Colleges  
Chicago, Illinois

Each year every arts college which sends students to medical schools receives a report from the Association of American Medical Colleges on the accomplishment of its students in medical school and in which third of the class each student stood. The college, in turn, reports to the Association on the standing of each student while in college. These data are correlated and the results have been published in the *JOURNAL*.

While these data show what, doubtless, every educator would expect them to show, they also give information, in detail, which would not otherwise be known. Hence, they have value. Furthermore, they have bearing on the selection of medical students, serving as an aid to other means of selection with which they can be correlated.

It is not known, although this point could be determined by a check involving considerable labor, how many students in each third of the class in college make application for admission to medical school, nor how many of those who do apply are accepted. It is apparent, from the accompanying table, that each third is fairly well represented in the medical student body. In the 1936 class in the medical schools of the United States, 35.3 per cent of the students stood in the upper third of their class in the arts college; 40 per cent were in the middle third; 24 per cent were in the lower third. It must be remembered that these thirds are arrived at on the basis of scholarship, not on the basis of numbers in the class. Inasmuch as selection of medical students is, in large part, based on scholarship, it must be assumed that not more than 50 per cent of upper third students wish to study medicine and that 15 per cent are refused admission for some other reason than scholarship. If the same reasoning applies to the lower third group, and the rejections in this group, being the greatest number, are made on the basis of poor scholarship, then 36 per cent are rejected for that reason. The middle third group shows the largest number of acceptances and, per contra, the smallest number of rejections—40 per cent having been accepted and 10 per cent having been rejected.

How well have these three groups carried on in the medical school? The answer to that question is shown in the accompanying table. The upper third group has done fairly well in medical school, although it is somewhat disappointing that only a trifle more than one half of these students remained in the upper third. On the other hand, only about 13 per cent fell into the lower third. The table does not show how many of these students had subject conditions or failures, or both, at the end of the year because these encumbrances usually are removed before entering the sophomore year. All of these students

are here recorded as "passing" students. It is shown here that about 84 per cent of the upper third group remain at the upper and middle third level, which is a very satisfactory showing.

The middle third group presents a somewhat different picture. Whereas, only about 40 per cent remain in the middle third, 29 per cent fell into the lower third group and only about 21 per cent reached the upper third level. In other words, there is a strong tendency in this group to drop to a lower level. The pace in the medical school has been too fast for most of them. The Student Register shows that during the entire four years of the medical course these levels are maintained to a considerable degree. True, there are exceptions to this rule, but, after all, they prove that the rule is correct.

COMPARISON OF STANDING IN CLASS (BY THIRDS) OF 1936 FRESHMAN CLASS  
IN MEDICAL SCHOOLS IN THE UNITED STATES.

Standing in Arts College (Thirds)	Standing in Medical School Passing Students (Thirds)			Out at end of year	
	Upper	Middle	Lower	Failed or Dropped	Withdrew
Upper 1936—35.3%	1934—52.0%	28.0%	14.0%	2.3%	3.7%
	1935—54.4%	27.4%	13.4%	2.1%	2.7%
	1936—55.2%	28.3%	13.0%	1.4%	2.1%
Middle 1936—40%	1934—20.2%	41.8%	24.0%	10.0%	4.0%
	1935—22.5%	40.1%	23.6%	9.5%	4.3%
	1936—20.9%	39.5%	29.4%	8.0%	2.2%
Lower 1936—24.0%	1934—10.2%	23.6%	39.3%	23.0%	3.9%
	1935—11.0%	16.1%	38.1%	27.0%	7.8%
	1936—10.7%	25.6%	39.0%	20.7%	4.0%

The lower third group also runs true to form, the greater number of this group remaining in the lower third, about 39 per cent; about 25 per cent succeed in making the middle third and only about 11 per cent reached the upper third of the class. Here, again, is evidence that these students do not rise above their scholastic level in the medical school.

Looking at the data on how many students are "out" at the end of the year, one is astounded at the showing made by each of the three groups. Perhaps, it may be said that the result here is as was to be expected. Comparatively few of the upper third group fail or are dropped. For the three years shown in the table, this percentage varied from 1.4 to 2.3. For the middle third group, the percentages were 8.0 to 10.0; for the lower third group 20.7 to 27.0. What an astounding variation! The upper third group also shows the smallest percentage of withdrawals on account of illness, lack of finances or some other reason than failing scholarship—although exact data on that point are not available because the reason for withdrawal is not always stated. Doubtless, some of the withdrawals are made because the student is convinced that either he does not like medicine or he realizes that it is beyond his depth and he decides to go into some other field of activity. The fact remains that each one of these groups remains fairly representative of its scholastic attainment according to the ratings made by the arts college.

If, then, one were to select for admission to medical school only applicants who stood in the upper and middle groups, the failures in medical schools would be considerably less than they are now, and only a very small percentage of applicants who eventually succeed in reaching the upper third level would be deprived of the privilege of studying medicine. The lower third group furnishes by far the greatest number of failures. In 1936, one fifth of these students failed or were dropped; more than one fourth were dropped in the preceding year. Including those students who withdrew, in 1935 more than one third of this group did not continue their studies (34.8 per cent) as against 4.8 per cent of the upper third group and 13.8 per cent of the middle third group. The upper third group may be considered a "sure thing"; whereas the lower third group is decidedly a "dead horse."

It would be most interesting to know what was the preparation for the study of medicine on the part of these several groups. What subjects were included in their course of study? Then, too, the college where these studies were made may be a determining factor in degree of accomplishment in medical school. Recently, some one used the term "substandard" college in the rejection of applicants. The term was used to designate a college which, though approved by a standardizing agency, did not measure up to standard scholastically.

Some light is thrown on this point by a survey of the accomplishment of the students from the 600 arts colleges represented in medical schools each year. Some of these colleges have a very poor record year after year. Perhaps they could be included in the list of substandard colleges. Data on this point are furnished the member colleges of the Association of American Medical Colleges each year. More and more use is being made of this information in the selection of medical students. Scholarship, aptitude test rating, psychologic and personnel tests, personal interviews, together with these data on the colleges, and the correlation of college and medical school scholarship should prove valuable in making selections.

It has often been said that there always will be a lower third. True! But the level will be higher than it is now. The bottom of the lower third would be what is now the bottom of the middle third. And, we would be spared at least two-thirds of the mortality at the end of the freshman year. Only one-fourth of the student body would be eliminated and it could easily be brought up to the usual number by accepting more of the upper and middle third applicants than we are now accepting. To do this would be an interesting experiment in education, one which would have considerable bearing on which courses should be taken by intending medical students in the arts colleges with a view to raising their scholarship in the medical school.

**PROGRAM**  
**FOR**  
**FORTY-NINTH ANNUAL MEETING**  
**OF THE**  
**ASSOCIATION OF AMERICAN MEDICAL COLLEGES**  
**TO BE HELD IN**  
**SYRACUSE, NEW YORK, OCTOBER 24, 25 and 26, 1938**  
**Headquarters: Hotel Onondaga**

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**History of Syracuse University College of Medicine.**

H. G. WEISKOTTEN, *Dean.*

**Future of the Public Health Movement.**

THOMAS PARRAN, *Surgeon General, U. S. Public Health Service.*

**The Place of Preventive Medicine in the Medical Curriculum.**

J. G. FITZGERALD, *Professor of Hygiene and Preventive Medicine,*  
*University of Toronto.*

W. S. LEATHERS, *Professor of Preventive Medicine and Public Health,*  
*Vanderbilt University.*

FREDERICK F. RUSSELL, *formerly Director of the International Health Board,*  
*Rockefeller Foundation.*

HARRY S. MUSTARD, *Professor of Preventive Medicine,*  
*New York University.*

DISCUSSION—Opened by ALFRED E. SHIPLEY, *Professor of Clinical Preven-*  
*tive Medicine and Community Health, Long Island Medical College.*

**Address.**

ALAN M. CHESNEY, *President Association of American Medical Colleges; Dean*  
*Johns Hopkins University School of Medicine.*

**Teaching of Syphilis.**

JOSEPH EARL MOORE, *Associate in Medicine,*  
*Johns Hopkins University.*

**Home Visits by Medical Students as a Teaching Asset.**

G. CANBY ROBINSON, *Lecturer in Medicine,*  
*Johns Hopkins University.*

HENRY G. MELENY, *Associate Professor of Preventive Medicine, Public Health,*  
*Vanderbilt University.*

IRA V. HISCOCK, *Professor of Public Health,*  
*Yale University.*

G. LOMBARD KELLY, *Dean*  
*University of Georgia School of Medicine.*

JOSEPH H. PRATT, *Clinical Professor of Medicine,*  
*Tufts College Medical School.*

DISCUSSION—Opened by H. G. WEISKOTTEN, *Dean, Syracuse University*  
*College of Medicine.*



**Child Research in a Medical School.**

ALFRED H. WASHBURN, *Director Child Research Council,  
University of Colorado.*

**Clinical Clerkships for Undergraduate Students.**

CHARLES A. FLOOD, *Assistant Dean,  
Columbia University College of Physicians and Surgeons.*

**When and How Shall Interns be Appointed?**

REGINALD FITZ, *Director Evans Memorial and Wade Professor of Medicine,  
Boston University.*

**Use of the Home Delivery Service in Syracuse  
in the Teaching of Obstetrics.**

E. C. HUGHES, *Associate Professor of Obstetrics,  
Syracuse University.*

**Preventing Hereditary Diseases that Wreck Childhood.**

WILLIAM ALLAN, *Charlotte, North Carolina.*

**Aptitude Scores, Premedical Grades and First Year Medical Grades  
During Six Years at West Virginia University.**

GIDEON S. DODDS, *Professor of Histology and Embryology,  
West Virginia University.*

### What Is Education?

True education must become  
 A creative industry  
 As investment it is wasted  
 On a sterile memory.  
 Beliefs, though quite conventional,  
 May yet change from day to day  
 But honest minds, if rational,  
 Know they have a debt to pay.  
 Our education must keep pace  
 With moving evolution,  
 Must be productive, earn a place  
 Worthy of recognition.  
 It took too long, too many years  
 To learn that mind's dynamic,  
 Some still believe, it yet appears,  
 That education's static.  
 Time has revealed the mind of man  
 A part of all creation  
 That must keep step with Nature's plan  
 Of growing evolution.  
 The methods useful yesterday  
 Must become still more exact  
 For in progress there is nothing  
 Eternally sacrosanct.  
 Apostles of the future years  
 Must need be quite elastic  
 Pitfalls avoid and make detours  
 'Round marshes academic.  
 Not that we history forget,  
 It has a useful story  
 In showing true as holy writ  
 Stars differ much in glory.  
 The stars that shine in many fields  
 Of recognized endeavor  
 Are often not the men compelled  
 To follow stiff procedure.  
 There is no royal road we know  
 Beside creative thinking  
 'Long which the intellect may go  
 That is so educating.  
 The standard still must be held high  
 But our compass must point true  
 If we reach the destination  
 We should clearly have in view.  
 In education we should aim  
 At power to know and do  
 Something useful, elevating  
 To ourselves, and others too.

—H. A.

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*National Council on Medical  
Education, Licensure and Hospitals*

Dr. Willard C. Rappleye, dean of Columbia University College of Physicians and Surgeons, proposes the establishment of a body to be known as the National Council on Medical Education, Licensure and Hospitals. The first suggestion to do this was made at the Congress on Medical Education, Licensure and Hospitals held in Chicago, February, 1938. The plan was outlined and elaborated in a paper read by Dr. Rappleye at the annual meeting of the American Surgical Association held in May, 1938. Elsewhere in this issue Dr. Rappleye's paper is published in full. The plan was given unqualified endorsement by the executive committee of the American Surgical Association.

It is intended that this body be "national" geographically, and that it shall deal solely with problems bearing on education in medicine, licensure and hospitals. It is not proposed to touch on economics or practice per se. The functions of the Council are to be advisory, not mandatory, judicial or legislative. It is believed that such a body, made up of representatives of universities, medical colleges, hospitals, boards of licensure and public health agencies, can discuss any topic that concerns education in its broadest aspects to the mutual benefit of all the people. It may be regarded as a "forum for debate" which will bring about sympathetic understanding of one another's problems, unity of action, friendliness. The organization of such a body, whether under the title proposed or some other, will mean an orderliness of procedure which cannot be attained otherwise. It will add weight to the opinions ex-

pressed by any representative on the council because he will represent a group. Calmness of deliberation will be ensured; hastiness of action will be checked. The council will not have any powers of enforcement. It will act as an advisory and a deliberative body on anything that pertains to medical education. It will not take over the functions nor duplicate the work of any other existing organization.

Two years ago, the president of the Association of American Medical Colleges was authorized to hold a so-called "president's conference" at which representatives of these same groups were to discuss problems of mutual interest. Two such conferences have been held. Their continuance is assured because of the interest displayed by those in attendance and the better understanding of aims and objectives which has resulted. The proposed national council is an elaboration of this idea of an annual conference as well as an effort to give it permanency and to add weight to the deliberations and to give wider publicity to whatever may come before the Council for discussion.

This Council doubtless will stand in the same relationship to medical education as the American Council on Education stands to education in general. The latter council is the continuance in perpetuity of the National Emergency Council on Education established during the World War. Its work has fully justified its existence, although it has concerned itself not at all with the problems of medical education. The proposed National Council, on the other hand, will concern itself almost entirely with medical education and not with general education, a field which is well covered by the American Council.

### 1938 Annual Meeting

The forty-ninth annual meeting of the Association of American Medical Colleges will be held in Syracuse, New York, October 24-26, under the presidency of Dr. Alan M. Chesney, dean of Johns Hopkins University School of Medicine. The Hotel Onondaga will be the headquarters. On each of the three days of the meeting one session will be held, beginning at 9:30 A. M. and continuing until about 12:30 P. M. An invitation to attend this meeting is extended to all those who have interest in medical education and the problems connected with it. Visitors may, if they wish, participate in the discussions on the papers read. In fact, they are urged to do so.

Elsewhere in this issue is published the program for the meeting. Two important symposia will be presented, one on the teaching of preventive medicine and public health, the other on the value of home visits by medical students as a teaching asset. The participants in these two symposia are authorities in their respective fields, hence their presentations will have especial value to educators and others. Their pronouncements should have great bearing on the reconstruction of teaching programs of medical schools to provide adequate opportunities for students to become thoroughly familiar with the problems which concern the maintenance of the health of the people through adequate preventive measures against disease and the careful and proper study of the sick in the environment in which their particular disease may have been contracted or to which it has contributed. Dr. C. P. Emerson, former dean of Indiana University School of Medicine, termed this "environmental medicine." Such a type of teaching was instituted many years ago by Dr. W. H. Doughty, then dean of the University of Georgia School of Medicine, when he persuaded the then health officer of the city of Augusta to turn over to the medical school the care of the sick poor of the city for a stipulated fee. Senior medical

students, under the supervision of a member of the faculty of the school, visited the sick in their homes as a part of their instruction in the care of the sick. This plan has been followed in Augusta for nearly twenty years and has proven quite successful.

The venereal disease control program, in which the United States Public Health Service is an outstanding factor today, will be discussed by Surgeon General Thomas Parran. The teaching of syphilis in medical schools will also be discussed.

The third session of the meeting will be devoted, in the main, to teaching, including the problem of the internship which has become a very live one. Some of its phases are not accepted by medical educators as being what they should be.

Eighty-four member medical colleges of the United States and Canada will be represented at the meeting which gives promise of good attendance and spirited discussion.

♦ ♦

### Early Medical Education

In 1876, Dr. J. M. Bodine, dean and professor of anatomy in the University of Louisville Medical Department, sent out an invitation to the deans of the medical colleges of the United States to meet and "to organize for a common advance in the standard of requirements."

A meeting was held in Philadelphia, June 2, 1876, at the Jefferson Medical College, and a provisional organization was effected. At the second meeting, held in Chicago, June 2, 1877, the organization was made permanent and a constitution and by-laws was adopted. It was "declared that the objects of this Association shall be the advancement of medical education and the establishment of a common policy among medical colleges in the more important matters of college management."

At the first convention, resolutions presented by Dr. Bodine were adopted. They embodied the hope of inducing

students to prolong and systematize their studies by recommending to the colleges to offer without extra cost the option of three courses of lectures graded in character in lieu of two repetition years.

The articles of confederation contained provisions as to the medical curriculum which were a distinct step in advance of the practice of most of the colleges at that time.

To Dr. Bodine must be given the honor of being the first medical educator and teacher to realize that there was need for concerted action by all the medical colleges then existing for placing medical education on a sound basis and to enforce maintenance by organizing into an association or confederation devoted to that purpose.

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#### *"Repeaters"*

By means of the records on file in the office of the Association of American Medical Colleges it is possible to know who is repeating in any medical college. Often these repeaters do not make known that they have previously attended a medical college, hence, if accepted, they are there under false pretenses. Such students are not entitled to credit for either time or work done in the second college. Some medical colleges check carefully on every applicant whose time is not accounted for since his graduation from the arts college or since he left the college if he did not graduate.

If medical colleges will submit a list of their freshman class to the Association for check, instances of fraudulent repeaters will be disclosed and the college notified thus saving everyone annoyance and embarrassment. It is becoming increasingly difficult for a dropped or failed student who is denied admission by the college in which he failed to secure admission in some other medical college—if he is honest in his statements. Each year cases are discovered of a student who denied previous attendance in a medical college because

of failure to be promoted. A man of that type will not be a worthy addition to the profession.

Have your students checked.

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#### *Teacher Placement Bureau*

In order that any activity of the Association prove distinctly worth while, it is necessary that the member colleges get behind it and push. The Teacher Placement Bureau is deserving of support because the participation of the Association is wholly voluntary. There is no charge for this service. Certainly the Association is in position to make good recommendations to the colleges and it does know something at first hand about the real worth of those who are likely to make use of the Bureau in securing a more desirable teaching position. If a college is seeking teachers, in any rank, it is quite likely that the Bureau can be helpful. If deserving teachers wish to change their college connection, the Bureau can be helpful if the colleges have filed their wants or needs with the Bureau. Furthermore, this Bureau is the agent of the colleges and their faculties. It is YOUR Bureau. Support it.

♦ ♦

#### *Come to Syracuse*

Every reader of the JOURNAL is cordially invited to come to Syracuse and attend the annual meeting of the Association. The subjects to be considered cover a wide range of interests. The practitioner, the college teacher, the medical college teacher, college and university executives, state board officials, health officers, all will find something to interest them on the very diversified program to be presented at this meeting. Opportunity to participate in the discussion on papers will be given to any one who is entitled to do so by reason of his position. Visitors are always welcome. Attendance at the executive session or business meeting is *restricted* to the representatives of colleges in membership in the Association.

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## College News

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### *Emory University School of Medicine*

The Abbott Laboratories of North Chicago, Illinois, have given this school \$3,000 to continue the research on new drugs for the control and treatment of malaria under the direction of Miss Elizabeth Gambrell, instructor in bacteriology and pathology.

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### *University of Pennsylvania School of Medicine*

Dr. Edward A. Schuman has resigned as professor of obstetrics.

Promotions: Dr. Albert C. Buckley to professor of clinical psychiatry; Dr. Donald M. Pillsbury to associate professor of dermatology and syphilology; Dr. Carl E. Bachman to professor of obstetrics; Dr. Douglas P. Murphy to assistant professor of obstetrics; Drs. Mitchell I. Rubin and Edward S. Thorpe to assistant professors of pediatrics; Dr. Arthur M. Walker to associate professor of pharmacology.

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### *University of Texas School of Medicine*

Dr. Wm. S. Carter will retire as dean after many years of service for the improvement of medical education. Dr. Carter first became dean in 1903. In 1922 he resigned to accept the post of associate director of the division of medical sciences of the Rockefeller Foundation which he held until 1934. In 1935, he was recalled to the deanship on the death of Dean Bethel.

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### *Tufts College Medical School*

Dr. F. P. Chillingworth, professor of pharmacology, died recently. During the World War he was in charge of the leper colony in Louisiana.

### *Cornell University Medical College*

Dr. Vincent du Vigneaud, professor of biochemistry in George Washington University School of Medicine, has been appointed professor and head of the department of biochemistry to succeed the late Stanley R. Benedict.

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### *Louisiana State University School of Medicine*

The appointment is announced of additional assistant professors, assistants and instructors in the following departments: Anatomy, 6; biochemistry, 1; pathology and bacteriology, 2; pharmacology and experimental therapeutics, 2; medicine, 2; obstetrics and gynecology, 2; pediatrics, 1; surgery, 4.

Dr. George W. McCoy, medical director of the U.S. Public Health Service, has been appointed professor of preventive medicine and public health. Dr. Rupert E. Arnell, formerly at the University of Chicago, has been appointed senior assistant professor in obstetrics and gynecology.

Promotions: Dr. D. D. Baker, from assistant to senior assistant and professor of anatomy; Dr. Geo. N. Ronstrom and Dr. A. H. Sellman from instructor to assistant professor of anatomy; Dr. James L. Gouaux, from instructor to assistant professor of physiology; Drs. Robert H. Bayley and Karl L. Dickens, from instructor to assistant professor of medicine; Dr. Julian J. Fertitta, from assistant to instructor in obstetrics and gynecology.

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### *New York Medical College*

A new laboratory and college building will be erected in the rear of the Fifth Avenue Hospital at a cost of \$1,500,000. It will be a ten story struc-



ture, extending from 105th to 106th Streets and will house all the college activities at present conducted at 64th Street and York Avenue and also the outpatient service of the Fifth Avenue Hospital.

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#### *University of Pennsylvania*

Extensive changes to be made in the University Hospital to provide facilities for development in several fields. Legal procedures incident to the merger of the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases were completed July 1. The orthopedic hospital will continue to be operated in its present plant until the new buildings at the University Hospital have been finished. Eventually the orthopedic and neurologic work will be carried on in buildings provided by the university.

A neurologic institute has been established with Detlev W. Bronk, Ph.D., director of the Eldridge R. Johnson Foundation in Medical Physics, as the director. The new institute will go into operation when the alterations have been made.

A new section, to be known as the Crothers Dulles Hospital, will be constructed as a center for obstetrics and gynecology with funds bequeathed by Mrs. Mary B. C. Dulles and her daughter. One floor of this section will be devoted to research, made possible by a grant of \$75,000 from the Commonwealth Fund of New York; another will be the headquarters of the George L. and Emily Harrison Foundation for Surgical Research, for which \$2,000,000 was left to the university several years ago. It will also be the home of part of the new department of radiology to be financed with funds given by Mr. William H. Donner. The Agnew Pavilion, which was damaged by fire in 1937, will be rebuilt and the J. William White Pavilion will be enlarged. The present maternity wing of the Maloney Clinic Building will become the

home of the expanded activities in neurology under Dr. Bronk after the Dulles hospital is completed.

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#### *Stanford University School of Medicine*

In cooperation with the San Francisco Department of Health and the San Francisco Hospital, The School will give postgraduate medical courses for physicians, September 12-16, 1938. The registration fee will be \$25 with an additional fee of \$10 for the courses in surgical anatomy and operative technic and otorhinolaryngology. Each student may take a morning and an afternoon course and all students should attend the evening meetings. Registration closes September 6th. Application for registration should be mailed to the Dean, 2398 Sacramento Street, San Francisco.

The four morning courses cover Traumatic injuries, acute abdominal emergencies and fractures; gynecology; ward rounds in medicine and disease of the chest. The afternoon courses cover the practical management of hypertension and nephritis in the doctor's office; pediatrics; proctology and surgical anatomy and operative technic. The evening meetings cover surgical pathology; clinicopathologic conferences; relation of sex hormones to cancer; diseases of the thyroid and diagnosis and modern treatment of common dermatoses. Special courses cover anesthesiology and otorhinolaryngology.

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#### *University of Iowa College of Medicine*

Dr. William Mason Hale, assistant professor of immunology, Yale University School of Medicine, New Haven, has been appointed professor and head of the department of bacteriology.

PROMOTIONS: Dr. William F. Menger and Dr. John H. Randall, assistant professors to associate professors of obstetrics and gynecology; Dr. Emory

D. Warner, assistant professor to associate professor of pathology; Dr. Harry M. Hines and Dr. Waid W. Tuttle, associate professors to professors of physiology; Dr. Thomas L. Waring, assistant professor of orthopedic surgery; Dr. James A. Greene, assistant professor to associate professor of theory and practice of medicine.

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*Tulane University of Louisiana  
School of Medicine*

Dr. Chas. F. Craig will retire as professor and head of the department of tropical medicine, September 1st.

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*Vanderbilt University  
School of Medicine*

On June 7th, members of the faculty of the School of Medicine of Vanderbilt University met at a dinner given in honor of Dr. G. Canby Robinson of Baltimore, Maryland, who served as dean of the School of Medicine from 1921 to 1929. Dr. Sidney Burwell, dean of Harvard Medical School and formerly head of the department of medicine at Vanderbilt, presided as toastmaster. A portrait of Dr. Robinson, painted by Thomas Corner of Baltimore, was presented to the University on behalf of friends, by Dr. E. W. Goodpasture, professor of pathology. Chancellor O. C. Carmichael accepted the portrait for the university. Chancellor Emeritus, James H. Kirkland, spoke on the history of the School of Medicine. Dr. Waller S. Leathers, dean of the School of Medicine, delivered an address on Dr. Robinson's service to the school and his personal qualities. Dr. W. H. Witt and Dr. Hugh Morgan of the school's faculty spoke as representatives of the community and the medical faculty. Dr. Glenn Cullen, Director of the Pediatric Research Institute of Cincinnati, formerly professor of biochemistry at Vanderbilt, represented the medical profession and the world in general.

The dinner climaxed two days of

medical alumni activities in connection with the close of school for the year. The two-day commencement clinic for alumni and the medico-military symposium was concluded with the lecture sessions in surgery and medicine.

June 6 and 7, the School of Medicine held its first Commencement Clinic for alumni and Medical Military Symposium for medical reserve officers, a type of postgraduate work which it is hoped will become an annual affair. The course of clinics and lectures was given under the auspices of the Committee on Postgraduate Instruction of the School of Medicine and arranged by a special committee of which Dr. W. D. Haggard was general chairman.

The event proved very successful, with a total registration of 147, of which 68 were medical reserve officers, who obtained inactive duty credits for their attendance. In addition to alumni and reserve officers the clinics were open to all other interested physicians, many of whom attended. The war department was also represented officially by a number of medical officers.

PROMOTIONS: Samuel M. Bloomstein, professor of clinical pediatrics; L. W. Edwards, associate professor of clinical surgery; Rudolph Kampmeier, associate professor of medicine; Ralph M. Larsen, assistant professor of surgery and anatomy; G. Sydney McClellan, assistant professor of obstetrics and gynecology; J. Frazier Binns, instructor in clinical pediatrics; William O. Vaughan, instructor in clinical pediatrics; Virginia Small, instructor in pediatrics; R. H. Hutcheson, instructor in preventive medicine and public health; Edward F. Parker, Jr., instructor in surgery; William J. Core, Daugh W. Smith and Charles Trabue, instructor in clinical surgery; E. Gurney Clark, instructor in clinical medicine; Hamilton V. Gayden, instructor in clinical obstetrics and gynecology; and Eugene T. Ellison, instructor in obstetrics and gynecology.

*University of California  
Medical School*

Drs. Chauncey D. Leake, professor of pharmacology, and James M. D. Olmsted, professor of physiology, attended the sixteenth International Physiological Congress in Zurich, Switzerland, last month.

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*New York Post Graduate  
Medical School*

Announcement is made of short courses for specialists in gynecology, surgery, ophthalmology, orthopedic surgery, traumatic surgery, otolaryngology, pathology, radiology for 1938-1939. These courses are designed for the advanced education of the specialist, not to make a specialist. All classes are limited as to number attending.

Courses for general practitioners also are offered as well as courses in dermatology and syphilology for the training of the specialist.

Details may be secured by addressing The Director of the School, 303 East 20th Street, New York City.

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*Wayne University  
College of Medicine*

NEW APPOINTMENTS: Dr. Edgar H. Norris, professor of pathology; Hans O. Haterius, Ph.D., associate professor of physiology; Dr. Paul H. Noth, assistant professor of medicine.

PROMOTION: Dr. Richard Johnson, from assistant professor of medicine to associate professor of medicine to be in charge of teaching at Eloise Hospital. Doctor Johnson has been appointed Medical Director of Eloise Hospital.

GRANTS AND GIFTS: A total of \$45,000 has been accepted by the University in support of research and teaching at the College of Medicine. The largest single gift was \$10,000 for the establishment of a research laboratory in ophthalmology. Dr. Parker Heath, professor of ophthalmology, has charge of the laboratory. Gordon L. Walls, Ph.

D., has been appointed research associate in ophthalmology.

Wayne University Foundation has been created to accept and administer gifts and grants to the University for education and research.

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*Temple University  
School of Medicine*

The degree of M.D. was conferred on 113 members of the senior class at the annual commencement held June 16. The commencement address was delivered by Mr. Henry Morgenthau, secretary of the treasury of the United States.

Dr. Lowrain E. McCrae has been promoted to assistant professor of urology. Many additions to the nonprofessional ranks of the faculty are announced.

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*Long Island College of Medicine*

Dr. Arthur W. Grace has been appointed Professor of Dermatology. Dr. Grace is a graduate of the University of London and has held many important positions on special commissions and as a teacher. His most recent appointment was instructor in clinical medicine in Cornell University Medical College.

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*University of Minnesota  
Medical School*

The board of regents announces a gift of \$10,000 from Mrs. John Dwan, the mother of Dr. Paul F. Dwan of the department of pediatrics, for the inauguration of a serum center at the university. A gift of \$7,300 was also announced from the Citizens Aid Society, Minneapolis, for the purchase of an additional roentgen therapy machine for the Cancer Institute.

The Board of Regents has accepted gifts from the trustees of the Stevens Avenue Home of Minneapolis and the Commonwealth Fund of New York

for the establishment and maintenance over a five year period of a Children's Psychiatric Clinic. This clinic will be affiliated jointly with the department of pediatrics and the department of psychiatry. Its primary purpose is to integrate the teaching of preventive psychiatry with pediatrics for senior medical students and for graduate students registered in psychiatry and pediatrics.

The Post Graduate Medical Institute's courses which have been offered to practicing physicians during the past two years in connection with the Center for Continuation Study have evoked such enthusiastic responses on the part of physicians and have seemed to meet such a definite need that the Commonwealth Fund of New York is providing a subsidy for the further development of this program over the next five years. This will make possible a study of the need for and the effectiveness of the courses offered, and experimentation with various types of instruction. Dr. William A. O'Brien has been transferred from his other duties to the Directorship of Post Graduate Medical Education on a full-time basis.

♦ ♦

*New York University  
College of Medicine*

Dr. William Smith Tillett, professor of bacteriology and director of the bacteriologic laboratories, New York University College of Medicine, has been appointed professor of medicine to fill the vacancy created last year by the death of Dr. John Wyckoff.

Dr. Thomas A. Gonzales, chief medical examiner of the city, has been promoted from associate professor to professor of forensic medicine. Other promotions include those of Wendell J. S. Krieg, Ph.D., to assistant professor of anatomy and David Wechsler, Ph.D., assistant clinical professor of psychiatry.

Dr. Howard Fox has retired as professor of dermatology and syphilology with the title of professor emeritus.

*Ohio State University  
College of Medicine*

A gift of \$200,000 has been received from the estate of Miss Marietta Comly, a memorial to her father, the late Dr. J. W. Comly, and to her brother-in-law and sister, Dr. and Mrs. Nathaniel R. Coleman, Columbus. Dr. Coleman at his death bequeathed his medical library to the university and Miss Comly contributed \$3,000 for additions to the library. Later she set up a trust fund of \$20,000 for an alcove to house the Coleman collection. In 1929 she gave \$1,000 for a student loan fund and in her will gave \$5,000 more for that purpose. The income from the gift will be used to expand research programs already in progress.

♦ ♦

*University of Michigan  
Medical School*

Ground has been broken for the new Neuropsychiatric Institute at the University Hospital. The building will be in the form of a wing to the north of the University Hospital and will be connected to the main building by corridors. Provision will be made for the care of sixty-three adults and twenty children. There will be facilities for occupational therapy, physical therapy and hydrotherapy. The new unit is designed to form a center for the diagnosis, care and active treatment of forms of incipient mental disease which are not likely to receive adequate care until a state of more profound disability is reached. Only patients who are ready to come on a voluntary basis are treated, entering through the regular admitting department of the University Hospital.

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*Jefferson Medical College*

Dr. Henry K. Mohler, medical director of the Jefferson Medical College Hospital, Philadelphia, has been appointed dean, succeeding the late Dr. Ross V. Patterson, effective August 1.

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## General News

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### *Canadian Medical Students Organize*

The students of some of the Canadian medical colleges have formed a national organization—the Canadian Association of Medical Students and Interns. The student bodies sponsoring this organization are: Medical Society of the University of Toronto; Aesculapian Society of Queen's University and the Hippocratic Society of the University of Western Ontario.

Several activities have been decided on: (1) Setting a uniform date for the appointment of interns; (2) educational program concerning tuberculosis among the students and interns.

♦ ♦

### *Finney-Howell*

*Research Foundation, Inc.*

Application for fellowships next year must be in the hands of the foundation by January 1, 1939. The appointments will be made the following March. Dr. William A. Fisher, 1211 Cathedral St., Baltimore, is secretary of the foundation.

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### *British Postgraduate Medical School*

Beginning October 3, a course of study for the diploma in clinical pathology is offered. The course will occupy 12 months. The subjects embraced will be: Hematology and clinical pathology; bacteriology; pathological chemistry; morbid anatomy and histology. Only a limited number of students will be accepted. The fee is \$210. Address the Dean, Ducane Road, Shepherd's Bush, London, W. 12.

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### *Medical Research in Canada*

The National Research Council of Canada has appointed a committee to study the organization of medical research in Canada, with Sir Frederick Banting, Toronto, as chairman. The immediate purposes of the committee

were stated to be: (1) to receive suggestions for requirements in respect of medical research and in matters related thereto; (2) to consider by whom the investigations required can best be carried out and to make proposals accordingly; (3) to correlate the information when secured and to make it available to those concerned, and (4) to do such other things as the committee may deem advisable to promote research. One of the first steps will be to make a survey of the work in progress at various centers to determine how the activities of the various institutions concerned may be developed to the best possible advantage.

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### *Hardman Cup to Dr. Sydenstricker*

The name of Dr. Virgil P. W. Sydenstricker, professor of medicine, University of Georgia School of Medicine, Augusta, will be inscribed on the L. G. Hardman Loving Cup, it was announced at the annual meeting of the Medical Association of Georgia. This honor is awarded annually to the physician considered to have rendered the most distinguished medical service during the previous year.

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### *Joseph A. Capps Prize Awarded.*

Dr. Ronald R. Greene has received the Joseph A. Capps Prize of \$500 for 1937 for his work on "Experimental Production of Intersexuality in the Female Rat." Founded by the late Dr. Edwin R. LeCount, the award is made annually by the Institute of Medicine of Chicago for the most meritorious investigation in medicine by a graduate of a recognized medical school in Chicago within two years after the completion of an internship or of one year in laboratory work. Dr. Greene graduated at Northwestern University Medical School, Chicago, in 1935.



## Abstracts of Current Literature

### *Lectures vs. "Doing"*

In an address delivered at the dedication ceremonies of the new building of the College of Medicine of Syracuse University, Dr. Ray Lyman Wilbur said:

"For many years in our medical schools it was thought that the student could be trained in medicine largely through the lecture system. When the laboratory became an essential part of every medical school and hospital the most striking change in medical education took place. The laboratory took more student hours than the lectures. After some years of use of the laboratory there came a greater appreciation of the need of immediate contact between the patient and the medical student. This gave vitality to the medical course and was mutually profitable. The medical student gained in knowledge, and the patient gained in better and more intensive care. The best policeman for good medical service is a wide-awake medical student in the wards of the hospital. We still use the lecture system for parts of medical training; but there is such constant change with new research that lectures must be kept up to date to be satisfactory. Some years ago I suggested to the members of a faculty that if they had their lecture notes complete and just right to their own satisfaction the thing to do was to tear them up and start all over again. All the lecturer can do in the medical course is to provide summaries of known information and stimulate the interest of the student in going further. I know of no more pathetic thing to see in a medical school than students devotedly taking down the lectures of their professors with the idea that they will parrot back the results and will have acquired a medical education. In essence, medical education is purely personal. It requires the

most rigid training of the body and the mind of an active, healthy, alert individual who can turn his full mental powers into a clear focus on the obscure complaints and ailments of a suffering human being. This can be learned only by *doing*—not by being told. "Doing" gets one down to fundamentals and away from theories."—*Federation Bull.* 24:163-170 (June), 1938.

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### *What's the Answer to This One?*

In the Journal of the American Medical Association for April 23, 1938, a very excellent table appears presenting in much detail the data concerning the licensure to practice medicine, showing how the graduates of each school fared before the boards of each state. All approved medical schools of the United States and Canada are exhibited, and there are summary-lines for Foreign Medical Faculties, for Extinct Medical Schools, and for Unapproved Schools.

Percentage of failure of the graduates of a given school or group is naturally regarded as significant. It is pointed out that of the graduates of United States approved schools, 3.7 per cent failed; of the Canadian approved, 7.8 per cent failed; of the foreign graduates 30.8 per cent failed; of unapproved schools 40.8 per cent failed.

These are most gratifying figures, patriotically and ethically speaking. But also perplexing. Is it true that the Canadian schools lag so far behind those on this side? Foreign schools might be expected to show up rather poorly—the language difficulty might figure prominently, for instance. Moreover, among the United States approved schools the percentage of failure varies startlingly; indeed from the all-pure 0.0 to 18.2.

The Journal article manipulates the



figures in several ways, but not in one way that it seems pertinent to analyze. How did the candidates fare before the boards of their "home" states (those in which they graduated) as compared with the performance before "outside" state boards?

E. and O. E., 3701 candidates from United States approved schools went before their "home" boards, and 67 failed—1.8 per cent. Candidates of the same class numbering 2044 went before "outside" boards; 143 failed—7.2 per cent.

Thus, when American graduates got away from their "home" boards, they fared almost precisely as the Canadian graduates did, who were of course all away from "home" boards.

This impression (of better success at home than abroad) is greatly heightened by the fact that three highly exceptional state boards were as tough on graduates from the home states as outsiders were; in Massachusetts the Board was tougher, the percentage being 13.7 failure for Massachusetts candidates, whereas Massachusetts candidates abroad fell down only 10.1 per cent of the time. New York graduates failed in 6 per cent of the instances either at home or abroad. Missouri failed 62½ per cent of its own graduates and their failure-percentage abroad was 10.3. If these three states are taken out of the picture, only twelve candidates out of 3013 failed before "home" boards—less than half of 1 per cent.

What is the interpretation of these amazing figures? Is medicine highly localized as to practice, background, and what is regarded as proper training? Is medicine one thing in New York, another in Illinois, and another in California? Anyhow, a graduate seems well advised to take his examination in the state in which he graduates; his chance of passing is four times as good. Indeed, unless he is in New York, Massachusetts or Missouri, it is about 28 times as good.

This stirs up another thought. Are the schools with a bad record of fail-

ures really so far behind other schools academically, or did their graduates merely pick the wrong places to be examined in? Remember this entire discussion concerns only graduates of approved schools.

Five state boards emerge from the figures as distinctly "tough." Connecticut failed 17 per cent of all "outsiders;" Florida 19 per cent; New York 23 per cent; Rhode Island 16 per cent. Massachusetts was tougher on the home product, failing 13.7 per cent of them. No other states are at all comparable to these standouts.

Examine now certain schools with about 10 per cent or more failures charged to them, which had a sufficient number of candidates to lend significance to the figures.

Georgetown, e.g., scored 10.4 per cent failures. It is in the District of Columbia and only a minor fraction of the graduates went before the "home" board. In the four states tough on outsiders, Georgetown grads passed in 21 cases, failed in 10; elsewhere 74 passed and only one failed.

Columbia shows up with a failure-percentage of 9.4. In the tough states Columbia grads passed 72 times and failed 9; elsewhere 15 Columbians passed with no failures.

McGill of Montreal has a gross failure-percentage of 9.8. In the tough states McGill men passed 17 times and failed 5; elsewhere 29 passed with no failures.

Creighton's failure-percentage was 13.9. No Creighton grads were examined in Florida or Rhode Island. In New York and Connecticut, 9 passed and 6 failed. Elsewhere, 53 passed and 4 failed.

St. Louis had a failure-percentage of 9.7. In the tough states, 30 St. Louisans passed, 7 failed. Elsewhere 100 passed and 7 failed—but 6 of these failures were in Missouri, which (see above) was exceptionally hard on the home product. In 11 other states, 31 passed with only 1 failure.

For Boston University and Tufts, Massachusetts has to be included as a tough state, for both are in Massachusetts which was tough on "homers." Boston comes out with a failure-percentage of 14.5. All of it was accumulated in the tough states where 32 passed and 8 failed; elsewhere 15 passed, no failures.

Tufts had 18.2 for a failure-percentage. In the tough states 88 passed and 24 failed; elsewhere 24 passed and only one failed.

Then here's another thing. Sixteen schools got by without any failure at all. Did the 16 "pures" concentrate on the four states tough on outsiders—or otherwise? There were 1,111 candidates from these schools; 40 of them were examined and passed in the tough states—3.6 per cent. Compare McGill, whose graduates faced the hard ones 40 per cent of the time. Vermont is the standout among the pures; eleven Vermont candidates took the hard way, out of a total of 42 and all 42 passed. No other "pure" is even close to this.

Unapproved schools, osteopathic

schools and undergraduates, as a mixed class, had a gross percentage failure of 40.8. For this class there were two standout tough states. Of the 551 candidates in the group, 300 were examined in Massachusetts and 72 more in New Jersey. Of these 167 passed and 205 failed. Elsewhere the group passed 159 times and failed 20—a failure-percentage of 11.1, spread over 18 states.

Whatever the answer may be to these curious statistical results, it seems clear that an important factor in procuring a license to practice medicine is where the examination takes place. It is hardly possible to believe that the poor students concentrate on a handful of states—i.e., the difference can scarcely be wholly in the quality of the training and of the competence. New York fails one in every four candidates graduating from approved schools not in New York, but only one in every sixteen New York graduates. Illinois passes 333 Illinois graduates without a failure, but 6 per cent of Illinois grads fail outside the state.—*Kalends of the Waverly Press*, Williams & Wilkins Co., June, 1938, p. 6.

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## Book News

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*Textbook of Gynecology*

By Arthur Hale Curtis, M.D., Professor of Obstetrics and Gynecology, Northwestern University Medical School. 3d Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$7.

This edition differs from the previous two editions in that it contains eight chapters concerned mainly with anatomy and physiology from a gynecologic viewpoint. There is also a detailed consideration of the endocrines and of the literature. These new features make this a compact, concise work covering the field of gynecology in its entirety. A splendid text for medical students.

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*American Illustrated Medical Dictionary*

By W. A. Newman Dorland, M.D., with the collaboration of E. C. L. Miller, M.D. 18th Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$7.50.

More than 5,000 new words have been added to this excellent dictionary which is a standard on terminology, capitalization, pronunciation, etymology, abbreviations, medical portraits and biographies, definitions. The numerous, nearly 1,000, illustrations make this an atlas as well as a dictionary. Every medical student should have a copy of this book. It is indispensable.

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*Practical Otolaryngology*

By Morris Levine, M.D., Clinical Professor of Otolaryngology, New York Post Graduate Medical School. 2d Ed. Lea & Febiger, Philadelphia, 1938. Price, \$5.50.

The needs of the undergraduate for a text on otology are well supplied in this book.

The work has been thoroughly revised throughout and has been brought

up to date in a multiple of details that are all of practical importance in the handling of diseases of the auditory apparatus. The author constantly emphasizes the fact that in the treatment of a patient with an otological disturbance, the ear cannot be considered separately from the rest of the body and that only when due attention is given to the general condition of the patient in addition to the local measures of treatment, will the best results be obtained.

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*Diseases of Women*

By ten teachers under the direction of Clifford White, M.D. Edited by Sir Comyns Berkeley, Clifford White and Frank Cook. 6th Ed. William Wood & Company, Baltimore. 1938. Price, \$6.

A splendid teaching text written by authorities in the various fields concerned with diseases of women. Convenient size and excellent typography. Recommended to medical students.

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*Diseases of the Skin*

By George C. Andrews, M.D., Associate Professor of Dermatology, College of Physicians and Surgeons, Columbia University. 2d Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$10.

The advances in dermatology are recorded in this book. More than 75 new diseases are described and many new chapters have been added: dermatoses due to filtrable viruses, vitamin deficiencies, cutaneous infiltrations with products of metabolism. Medical students will find the numerous prescriptions helpful as well as the discussions on allergy, sensitization tests, desensitization and dermatologic surgery. More than 200 new illustrations are shown.

*Textbook of Histology*

By Alexander A. Maximow, late Professor of Anatomy, and William Bloom, Associate Professor of Anatomy, University of Chicago. 3d Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$7.

This book easily remains the standard text on histology. Physiology is correlated with structure and pathologic change where it helps to explain normal structure and function. Dr. Stephen Polyak has taken over the section on nervous tissues which was formerly contributed by Professor C. Judson Herrick.

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*Textbook of Bacteriology*

By Thurman B. Rice, M.D., Professor of Bacteriology and Public Health, Indiana University School of Medicine. 2d Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$5.

Essentially a text for the medical student, of convenient size, representing merely an introduction to the subject, which is just what the medical student needs. It will not make a bacteriologist of him, but it will give everything that the practitioner of medicine must know of the subject.

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*Diseases of the Throat, Nose and Ear*

By William Lincoln Ballenger, M.D., late Professor of Otology, Rhinology and Laryngology in the College of Medicine, University of Illinois, and Howard C. Ballenger, Assistant Professor of Otolaryngology, Northwestern University Medical School. 7th Ed. Lea & Febiger, Philadelphia. 1938. Price, \$11.

Practical and complete. All obsolete and repetitious matter has been eliminated and replaced by important new material. New chapters cover the etiology, pathology and symptomatology of thrombosis and the benign and malignant neoplasms of the nose, throat and larynx. New sections have been added on physical therapy in otolaryn-

gology, separate chapters have been devoted to deep neck infections and petrositis, as these subjects have assumed roles of great importance in recent medical literature. Sinusitis in infants and children is given special consideration and sections on many other topics have been radically revised or rewritten.

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*The Doctor in French Drama, 1700-1775*

By Christine E. Petersen. Columbia University Press, New York City. 1938. Price, \$2.25.

Throughout the ages, the doctor has been a familiar figure in literature. Besides providing interesting portrayals of the various types of doctors who have lived in the world, this non-Hippocratic literature sheds an indispensable light on the state of medicine in the different periods of history. A multitude of scholars have studied both the doctor and medicine on the basis of these records. But few of the studies have any phase of French drama for their subject—with the exception of Moliere's plays—and the eighteenth century has been practically untouched.

Miss Petersen has closed the gap with a most comprehensive survey. Through the medium of the French dramatists, we see how the doctor changed from the pedantic and solemn doctor of the *Commedia dell'Arte* and of Moliere's plays to a coquettish fop. We learn of the petty jealousies between the doctors and of the spectacular quarrels between the physicians and surgeons. At the same time, the plays depict the contemporary state of medicine and, by their jovial and searching criticisms, shed much light on the history of medicine.

Contents: 1. Introduction; 2. Doctors of the *Commedia dell'Arte* type; 3. Molieresque Types and Jokes; 4. The Quarrel of the Faculties; 5. Quacks and Faddists; 6. Society Doctors; 7. The Doctor Off the Stage; Chronology of Plays containing Medical Characters or Medical References; Sources Cited; Index.

*Electrotherapy and Light Therapy*

By Richard Kovacs, M.D., Director of Physical Therapy, New York Polyclinic and Medical School. 3d Ed. Lea & Febiger, Philadelphia. 1938. Price, \$7.50.

This work aims to present that part of modern physical therapy which practicing physicians can themselves carry on in their offices, thereby increasing the scope and efficiency of their services. It presents the essentials of electrophysics and leads up to the physics of the various electro-medical currents, the apparatus for their reproduction and their physiological effects upon the body. The indications and contraindications, the possible dangers and the technique of application are all covered. The physics of radiant energy, the physiological effects of the various forms of light and the clinical application of heliotherapy are similarly presented. The section on electrophysics has been revised and a new chapter on the relation of electrophysiology to electrotherapy has been added. The chapters on galvanic current and on electrophoresis have been thoroughly revised. Two entirely new chapters now deal with short-wave diathermy in which there is so much current interest. Its physics, effects, indications and technique of application are all discussed. There is a new chapter on artificial fever by electrical means, and the chapters on electrosurgery and on light therapy have been amplified. The glossary has been expanded to include definitions relating to short-wave diathermy and eighty-seven new illustrations have been added.

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*Manual of Radiological Diagnosis*

By Ivan C. Tchaperoff, M.D., Assistant Radiologist, St. Thomas' Hospital, London. William Wood & Company, Baltimore. 1938. Price, \$6.

Original, concise, complete, filling a gap in this field. Brief but comprehensive descriptions of the anatomy and X-ray appearances of injuries and diseases throughout the entire human sys-

tem. Reproductions of roentgenograms are excellent. A good aid to diagnosis.

♦ ♦

*Textbook of General Bacteriology*

By Edwin O. Jordan, Ph.D., late Professor of Bacteriology; revised by William Burrows, Ph.D., Assistant Professor of Bacteriology in the University of Chicago. 12th Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$6.

This work has long been a standard text for medical students as well as for those who intend to remain in this field. It is so well known that there is no need to point out any of its many excellent features. Careful revision has brought the text up-to-date.

♦ ♦

*Textbook of Ophthalmology*

By Sanford R. Gifford, M.D., Professor of Ophthalmology, Northwestern University Medical School. W. B. Saunders Company, Philadelphia. 1938. Price, \$4.

Presenting in a small volume the essential facts of modern ophthalmology, with emphasis on important facts. The chapters on examination of the eye, the eye in general diseases and appraisal of loss of visual efficiency are of special value to the medical student in his clinical clerkship. The book should have appeal as a text in ophthalmology.

♦ ♦

*Treatment in General Practice*

By Harry Beckman, M.D., Professor of Ophthalmology, Marquette University School of Medicine. 3d Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$10.

This book is so well and favorably known that there is no need to comment on its worth. It is a good guide to treatment, one which should appeal not only to the practitioner but also to the student because it fills adequately the gap still existing in the teaching of therapeutics in medical colleges. This book really tells him what he can do for his patient by way of treatment.

*Surface and Radiological Anatomy.*

By Arthur A. Appleton, M.D., Professor and Director of the Department of Anatomy, St. Thomas' Hospital Medical School, William J. Hamilton, M.D., Professor of Anatomy St. Bartholomew's Hospital Medical School and Ivan C. C. Tchaperoff, M.D., Assistant Radiologist, St. Thomas' Hospital, London. William Wood & Company, Baltimore. 1938. Price, \$5.50.

The essentials of normal radiological anatomy are shown in relation to the facts of anatomy derived from dissection and surface examination. Landmarks which have the greatest value in surface anatomy and which are most serviceable in radiology are stressed. A special process of reproduction is used which emphasizes the detail of the many colored and monochrome illustrations.

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*Theoretical Principles of Roentgen Therapy*

By Ernst A. Pohle, M.D., Professor of Radiology, University of Wisconsin. Lea & Febiger, Philadelphia, 1938. Price, \$4.50.

For the radiologist and the research worker in this field. Deals exclusively with theoretic principles, presenting the basic facts of the physics of roentgen rays, the function and construction of apparatus, dosimetry and reaction of normal and diseased tissue to irradiation. Should have great value for the group for whom it is written.

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*Digestive Tract Pain: Diagnosis and Treatment*

By Chester M. Jones, M.D., Assistant Professor of Medicine, Harvard University. The Macmillan Company, New York. 1938. Price, \$2.50.

Presenting a study of pain and other sensations caused by disturbances of the digestive tract and experimental observations on pain produced at various levels throughout the entire digestive tract, with citation and discussion of many

cases. The therapeutic considerations are specially valuable. "Back pain" receives its proper share of attention. A very good book. The physical make-up of the book deserves special mention; the non-glare paper of fine quality; the size and spacing of the type with not too much on a page. A fine example of the art of printing.

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*Practical Otology, Rhinology and Laryngology*

By Adam E. Schlanser, M.D., Colonel Medical Corps, U.S. Army; Chief of the Eye, Ear, Nose and Throat Service, Lettermann General Hospital, San Francisco. Lea & Febiger, Philadelphia. 1938. Price, \$4.50.

A book written especially for medical officers of the U. S. Army, but its conciseness and clarity should make it a good book for the medical student who needs to have information in these special fields preparatory to entering them as a specialist or if he prefers to remain in general practice in a locality where he is forced to depend on himself and give every type and form of service.

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*Medical State Board Questions and Answers*

By R. Max Goepp, M.D., formerly Professor of Clinical Medicine in the Graduate School of Medicine, University of Pennsylvania, etc. 7th Ed. W. B. Saunders Company, Philadelphia. 1938. Price, \$5.50.

As long as state board examinations are what they are, books such as this, written by men of experience in this field, will have an appeal for the man who is getting ready to have his learning tested—on paper. This work has lived for thirty years. It must have a place somewhere in the scheme of things and many an aspirant for licensure must have found it helpful. It is well worth the price because it is also a good book for a general review for those who have earned the right to practice.



